

Cassette Car Radio 22RC548 - 578/00

CD Car Radio 22RC668 - 688/00

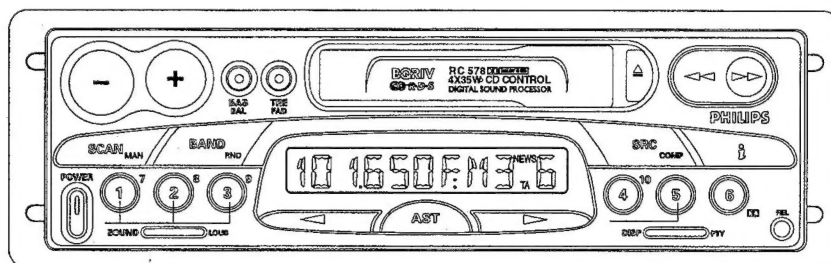
Service
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Service

For repair information of the Cassette deck, see Service Manual No 4822 725 xxxx of Auto Cassette Deck SCA4-3

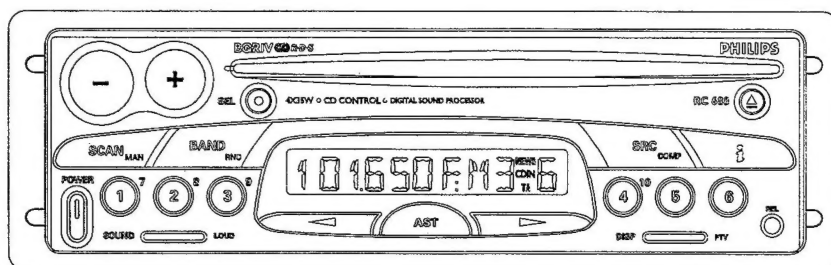
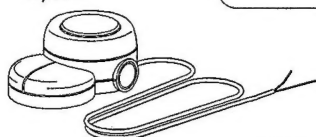
For repair information of the CD player, see Service Manual No 4822 725 xxxx of CD mechanism CDM9-3A

Service Manual

12 V 



Option



COMPACT
disc
DIGITAL AUDIO

CLASS 1
LASER PRODUCT

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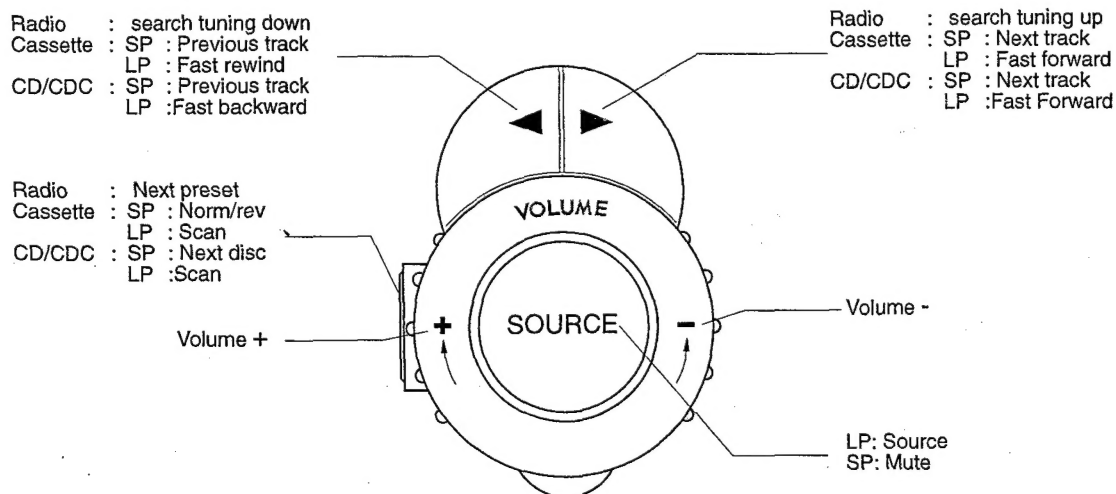
PHILIPS

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REMOTE CONTROL

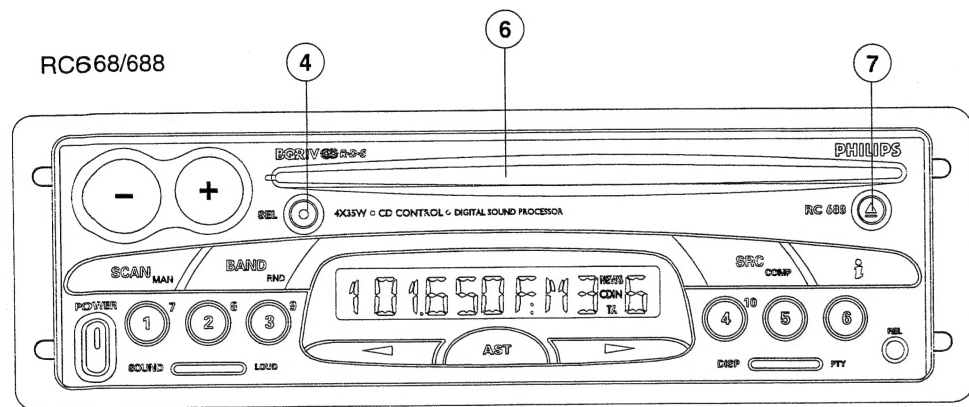
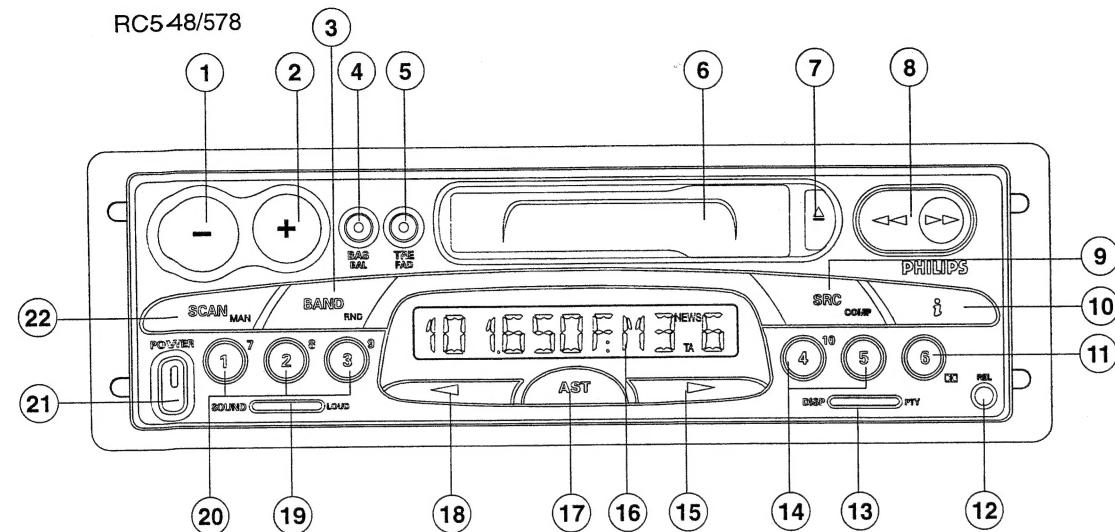
This set can be controlled also by a remote control allowing you to carry out some of the main functions of the set.

See the drawing below:

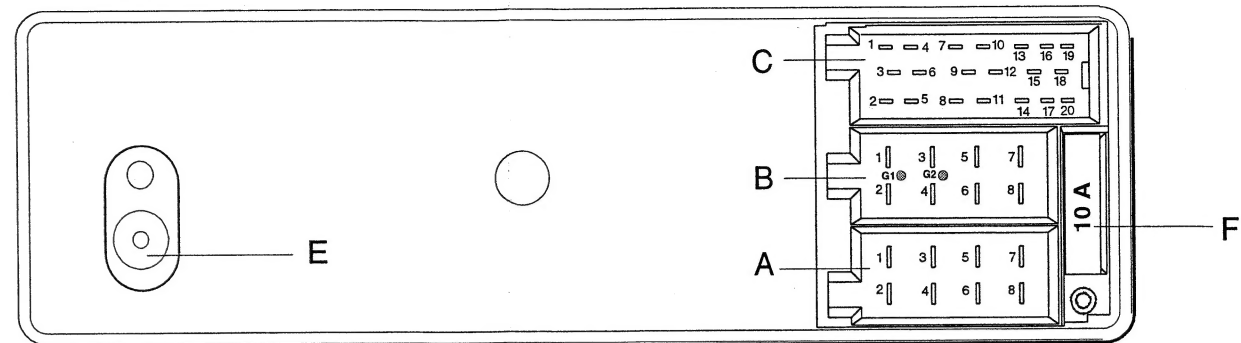


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22RC688/00

Commands



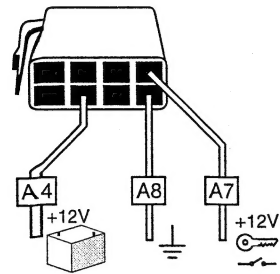
POS	RC548/00	RC578/00	RC668/00	RC688/00
1	VOL -			
2	VOL +			
3	Selection band	Selection band / Random		
4	Bass / Bal	Audio Selection		
5	Treb / Fad			
6	Cassette opening	CD opening		
7	Reverse / eject cassette	Disk eject		
8	FRW / FFW button			
9	Source selection	Source selection / compression		
10	Traffic information / News			
11	Preset 6 / Dolby	Preset 6		
12	Release button for detachable unit			
13	Display / Program type selection			
14	Preset 4, 5	Preset 4,5 / CDC sel n° 10	Preset 4, 5	Preset 4,5 / CDC sel n° 10
15	Search UP	Search UP / Track UP		
16	Display			
17	Autostore			
18	Search DOWN	Search DOWN / Track DOWN		
19	Sound / Loudness			
20	Preset 1, 2, 3	Preset 1, 2, 3 CDC sel n° 7, 8, 9	Preset 1, 2, 3	Preset 1, 2, 3 CDC sel n° 7, 8, 9
21	ON / OFF			
22	Scan frequency / Manual search selection	Scan frequency / Scan track Manual search selection		



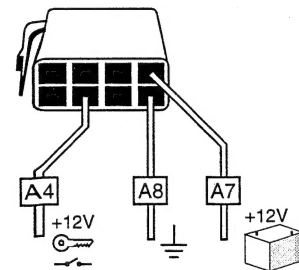
POS	FUNCTION	RC548/00	RC578/00	RC668/00	RC688/00
A1	Phone mute	X	X	X	X
A2	Remote GND	X	X	X	X
A3	Remote Input	X	X	X	X
A4	Plus accessories or permanent	X	X	X	X
A5	+ Antenna	X	X	X	X
A6	Pilot light	X	X	X	X
A7	Plus permanent or accessories	X	X	X	X
A8	GND	X	X	X	X
B1	Rear right +	X	X	X	X
B2	Rear right -	X	X	X	X
B3	Front right +	X	X	X	X
B4	Front right -	X	X	X	X
B5	Front left +	X	X	X	X
B6	Front left -	X	X	X	X
B7	Rear left +	X	X	X	X
B8	Rear left -	X	X	X	X
G1	Gateway (I2C bus access)	X	X	X	X
G2	Gateway (I2C bus access)	X	X	X	X
C1	Line out RL		X	X	X
C2	Line out RR		X	X	X
C3	Line out GND		X	X	X
C4	Line out FL		X	X	X
C5	Line out FR		X	X	X
C6	+ Switched		X	X	X
C13	Bus D2B +		X		X
C14	Bus D2B -		X		X
C15	Bus GND		X		X
C16	+ Permanent		X		X
C17	+ Switched		X		X
C18	Input reference		X		X
C19	Input left		X		X
C20	Input right		X		X
E	AERIAL PLUG	SLIDE IN			
F	FUSE	10A			

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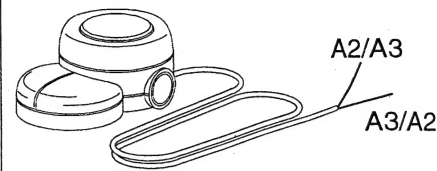
Normal power supply connection



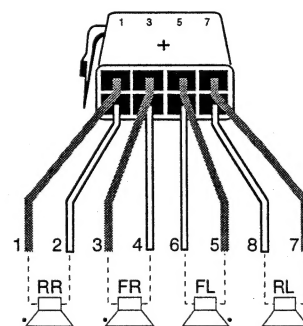
Power supply connection for ON-OFF LOGIC



Remote control (option)



4X30W



TECHNICAL DATA

GENERAL

Power supply	: 10 to 16V DC
Dimensions	: 180x160x51 mm
Front	: Full detachable
Security code	: No
Blinking LED	: Yes
Quiescent current (at 12.6V)	: <3mA (with clock and blinking LED)
Illumination color	: Orange / Green

RADIO

LW	: 144-288 KHz - steps Manual / Search : 1 KHz
MW (Europe)	: 531-1629 KHz - steps Manual / Search : 1 / 9 KHz
MW (USA)	: 530-1710 KHz - steps Manual / Search : 1 / 10 KHz
SW	: 5.95-6.25 MHz - steps Manual / Search : 1 KHz
FM (x3)	: 87.5-108 MHz - steps Manual / Search : 50 / 100 KHz
IF-AM (1/2)	: 10.7 MHz / 450 KHz
IF-FM (1/2)	: 72.2 MHz / 10.7 MHz
Sensitivity 26dB S/N	: 38 µV (LW)
	: 30 µV (MW)
	: 25 µV (SW)
	: 4 µV (FM)
	: 5 to 20 µV

Limitation α-3dB

CASSETTE

Cassette mechanism	: SCA4.3/H
Number of tracks	: 2x2
Tape speed	: 4.76 cm/sec
Wow and flutter	: < 0.30%
Crosstalk	: > 45dB

CD (only RC668/688)

CD mechanism	: CDM9-3A
Frequency response	: 30 - 16000Hz
Crosstalk L-R at 1KHz	: >30 dB

AMPLIFIER

Output power	: 4x19W / 4Ω (THD = 10%)
Treble control	: +10 / -10 at 10kHz
Bass control	: +12 / -12 at 80Hz
Balance control	: 70dB
Fader	: 70dB

ESD



ESD equipment available:

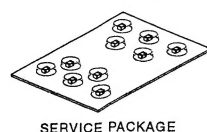
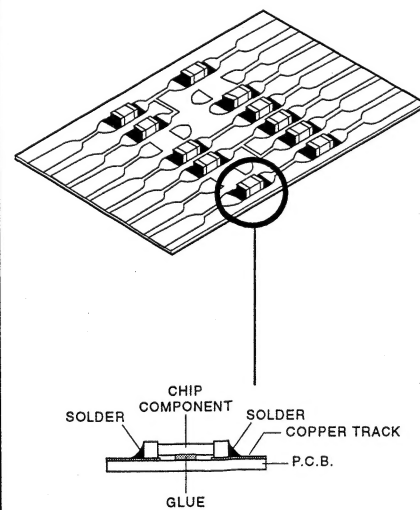
Anti-static table mat large 100X650X1.25mm	4822 466 10953
small 600X650X1.25mm	4822 466 10958
Connection box (1Mohm)	4822 395 10223
Extendible cable (to connect wrist band to connection box)	4822 320 11307
Connecting cable (to connect table mat to connection box)	4822 320 11305
Earth cable (to connect any product to mat or box)	4822 320 11308
Complete kit ESD3 (combining all above products)	4822 310 10671
wristband tester	4822 344 13999

WARNING

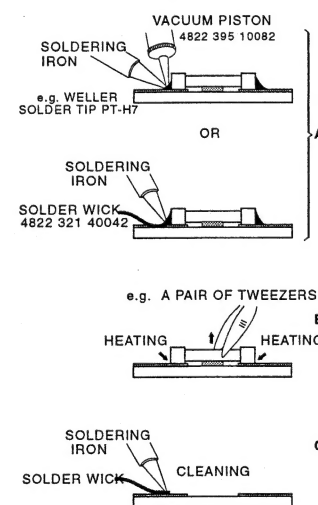
All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

HANDLING CHIP COMPONENTS

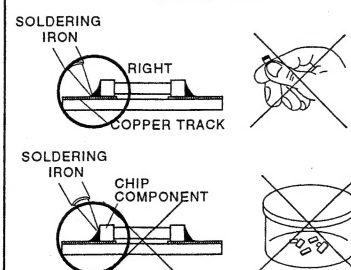
GENERAL



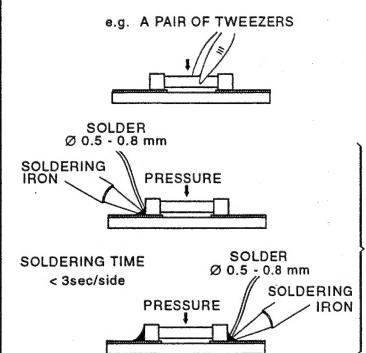
DISMOUNTING



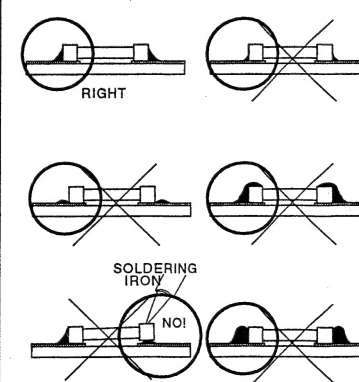
PRECAUTIONS



MOUNTING



EXAMPLES



INIT MODE:

The customer may have modified some settings with the Init Mode.

Entering the Init Mode:

Switch ON the set. Press the BAND key for at least 2 seconds, until you hear a beep.

The display shows "INITIAL".

Press the ◀ or ▶ key one or more times until the option you want to modify is displayed.

Briefly press the AST key one or more times to adjust the choice.

- The choice shown on the display will be memorized by the set when you select another option or leave the "INIT" mode.

Press the BAND key for at least 2 seconds to leave the "INIT" mode.

Note: the set automatically leaves the "INIT" mode about 1 minute after your last operation.

List of "INIT" options: (Initial factory settings shown in **bold**).

Option ◀ or ▶	Choice (AST)	Usage
SRCH	DX , LO	Select LO if you wish to search only for strong stations during automatic tuning to a frequency.
SRC	CDC , AUX	Source connected to connector C3: - Select CDC for a Philips CD Changer (D2B type); - Select AUX for a portable audio player.
CD	-4 -3 -3 -1 0 +1 +2 +3 +4	Volume level of CD relative to tuner.
CDC or AUX	-4 -3 -3 -1 0 +1 +2 +3 +4	Volume level of CD changer or AUX input relative to tuner.
TA	-4 -3 -3 -1 0 +1 +2 +3 +4	Volume level of Traffic Announcements, News bulletins and Alarm messages relative to tuner.
VIEW	-1 0 +1	Select the viewing angle of the set's display.
COLOUR	G O	Select the desired display colour: Green or Orange.
LOUD B	1 2 3	Select the level of correction for the low notes (Bass).
LOUD T	0 1 2 3	Select the level of correction for the high notes (Treble).
PHONE	NO LO HI	Select LO or HI according to phone (LO in most cases). Select NO if no phone connected.
BP TYP	1 2 3 4	Select type of confirmation beeps.
BP LEV	1 2 3 4 5	Select volume of confirmation beeps (useful if external amplifier is connected).
LW	OFF ON	Select OFF to suppress LW band if it is not used.
MW	OFF ON	Select OFF to suppress MW band if it is not used.
SW	OFF ON	Select OFF to suppress SW band if it is not used.
TUN	EURO AMER	Select the tuner according to European or American standards.
TIME	12 H 24 H	Select desired clock format.
CLKRDS	N Y	Select Y if you want the time to be updated automatically. <i>The transmitted time via RDS can be incorrect</i>
LOGI	OFF ON	Select ON to limit the use of the set to one hour, when the car ignition is switched off.
COMP	1 2 3	Select 1 to maintain the peaks in the volume. Select 3 to level out the volume.
BASS	40 80	Select average frequency of the low notes.
TREB	5K 7K	Select average frequency of the high notes.
SCAN	5 10 15	select how many seconds the set scans one station or track.
REG	OFF ON AUTO	Select ON to maintain the regional programme. Select OFF to directly switch to the programme of the next region. AUTO only switches when the next signal is stronger.
LED	OFF ON	Select OFF if you do not want the LED to blink when the front is removed.

DEMO MODE (or Dealer Mode)

In this mode, the display shows in sequence the main features of the set.

Activating the Demo mode:

While keeping the preset 1 and preset 5 keys pressed, switch On the set.

The set remains in this mode even if you switch the set OFF and ON again.

To quit the Demo mode, follow exactly the same procedure as "Activating the Demo mode".

TEST MODES:

1) Display test

This test is called by pressing simultaneously presets 1 and 6 keys (set On).

The display shows in sequence: all segments lit

the internal factory code of the microprocessor

the software release number. It is for these sets **1.04** or **1.05**, until further notice.

To quit this mode, switch Off the set .

2) Keyboard test

This test is called by switching the set On while keeping pressed the preset 3 key. The display shows: T - -
Then press each key at least one time. A different number will appear each time you press a new key (e.g. T 0 1).

When all the keys are pressed, if all is correct, the display shows MOUSE.

Activate the [Vol -] command of the mouse. The display shows all segments lit. The test is now finished.

This test can be exited at any moment by switching Off the set.

3) Field test

This test is called by pressing simultaneously presets 2 and 4 keys (set On).

The display shows:

4 digits indicating the tuned frequency

5th digit: Level 0..F (F = best fieldstrength)

6th digit: Multipath 0..F (0 = no multipath)

7th digit: Noise 0..F (0 = no noise)

8th digit: Suppression counter (0 = no necessity to switch to another station)

This test can be exited by switching Off the set or by pressing again presets keys 2 and 4 at the same time.

4) Loudspeakers installation test (Only on software version 1.05)

This test is called by pressing simultaneously keys SCAN and **1**

The display shows in sequence FRONT L - FRONT R - REAR R - REAR L while the corresponding loudspeaker beeps 5 times.

This test is exited by switching Off the set.

EEPROM

Several values and adjustments are stored in the EEprom. The EEproms available in Service are filled with mean values.

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Check and Alignment

For all measurements, please refer to the manual "General Check & Alignment procedures for Car Systems" 4822 725 25456, unless otherwise stated

Current and voltage

1) SET OFF

SET OFF	Voltage	Current +Acc ON	Current +Acc OFF	Supply mP pin 14 7513	V_LOW pin 34 7513
Acc Supply	+12.6V	< 3mA		min 4.8V max 5.2V	max 0.8V
Perm Supply	+12.6V	< 3mA	<3 mA		

2) SET ON

Reset pin 30	Supply mP pin 14 7513		V_LOW pin 34 7513		5V pin3 L7805 ABV		8.5V pin 3 L4885CV		V EEprom	
max 0.8V	min 4.8	max 5.2	min 2	max 5.7	min 4.8	max 5.2	min 8.2	max 8.8	min 4.8	max 5.2

Reference oscillator frequencies (to be measured via a X10 probe)

device	MSM 6307	83CE558	HEF4521	SAA7701
pin	24 & 25	51 & 52	4 & 6	63 & 64
frequency	6 MHz 0.5%	16 MHz 0.5%	4.194304 MHz 20 ppm	36.860 MHz 60 ppm

Checks:

1) FM

FM mute	98 MHz 1mV	output at load resistor R & L = 775 mV = REF
	no signal	output should be < -24 dB (REF - 24 dB)

Demodulated FM level	98 MHz	215 mV 2dB			
	Input	MPX Output of IC96 (pin 10)			

Limiting point α -3dB	FM 98MHz	FM	6 μ V	3 μ V	14 μ V
	RANGE	INPUT	NOMINAL	MIN	MAX

Search levels	Input	Dx: 10 μ V < X < 20 μ V Local : 190 μ V < X < 290 μ V
	98 MHz	

2) AM

Demodulated AM level	1053KHz - m=30% - 1KHz	230 mV 2dB
	Input	Audio output of IC96 (pin 19)

Sensitivity at 26dB S/N	162KHz	m = 30%	400Hz	< 38 μ V
	1053KHz			< 30 μ V
	6100KHz			<25 μ V

Search levels	Input	Dx: 7 μ V < X < 21 μ V Local : 35 μ V < X < 105 μ V
	1053KHz	

No alignment is needed for radio part. The tuner module IC96 is pre-aligned in the factory. Dolby alignment, crosstalk alignment and FM DC level curve learning procedure are performed via a special equipment and software, not yet available in Service.

Some values are stored in the EEprom.

The EEprom available in service will contain mean values, that could affect slightly the performance of the set. It is the only solution until further notice. The service code of this EEprom will be given in a next Service Newsletter.

If you change the tuner module, change also the EEprom.

Deck part (for RC548/578)

Use test cassette SBC420 4822 397 30071 unless otherwise stated.

Tape speed and flutter: Use 3.15KHz test tone	Supply voltage	Tape speed	Flutter
	10.8 - 15.6 V	4.76cm/s 2%	< 0.3%

Crosstalk : use 1KHz 0dB crosstalk signal	< -35dB at speakers output R & L
---	----------------------------------

CD part (for RC668/688)

Test CD	Test	Result
Eccent-music 150um 4822 397 30279	Insert disk and play track 01	No failure
Vertical deviation 4822 397 30282	Check loading, display of number of tracks and total time. Select track no 9 time 00.20 listen to the disk during 4 seconds	no electrical nor mechanical noise

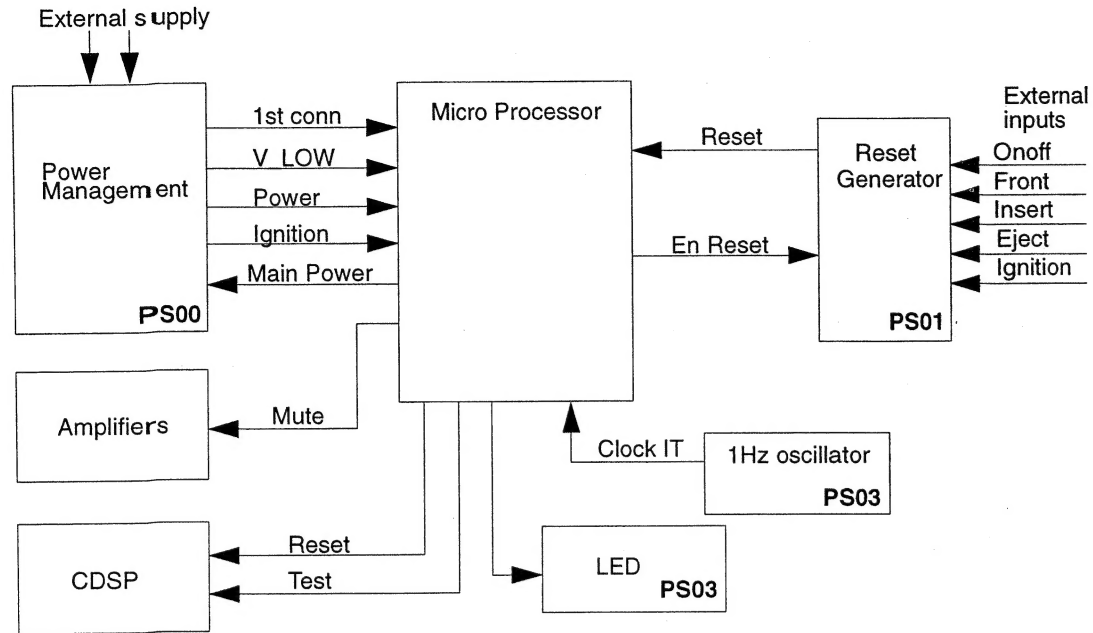
Test CD	Test		Result
Audio signal disk 1 4822 397 30184	Compression Off	Crosstalk track 67 and 71	Crosstalk < -65dB
	Compression On		Crosstalk < -60dB (comp 1 by default)

Signal to noise ratio

A weighted filter, track 1 versus track 49 of disk 1	
Compression Off	S / N > 80dB
Compression On (default 1)	S / N > 70dB

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22RC688/00

POWER SUPPLY ORGANIZATION



Short explanation

The reset is generated after a user action by the reset generator. Its task is to generate resets to the micro p. at input change and at power recovery (when V_LOW (pin 14 7403) is high again) only when EnReset (pin 12 7402) input is low.

If EnReset is high, no resets are expected (set is ON).

The Power Management device gives information about supply to the micro p. and provides two digital outputs (1st conn, V_LOW (pin 11 7401)), two analog outputs (Power, Ignition) and one digital input (Main Power).

The 1st connection information is a fugitive information (around 100ms, available on RESET_uC) which is memorized by the micro p. and leads to first connection actions such as RAM clear. The V_LOW output is connected to an interrupt and goes LOW when power is falling under 8V (in fact 7.9 to 9.8V, due to spread of components). It goes high again when power comes back.

Power and Ignition analog outputs are provided to enable the micro p. to measure both supply voltages. Main power is an input that turns On and Off the power on the board.

Mute, reset and test output pins of the micro p. are performing actions on amplifiers and CDSP while the one hertz oscillator allows to update internal system clock.

1) Reset at first connection

At the first connection of the set to supplies, a "Power-on-reset" (1st_PWR_ON) will be generated via regulator L4949. This hardware reset is active till the 5V for the micro p. is stable.

2) Reset by input lines while set is OFF

The set is awoken by the an hardware reset while the micro p. is in OFF state (power down mode). Several inputs can generate the reset.

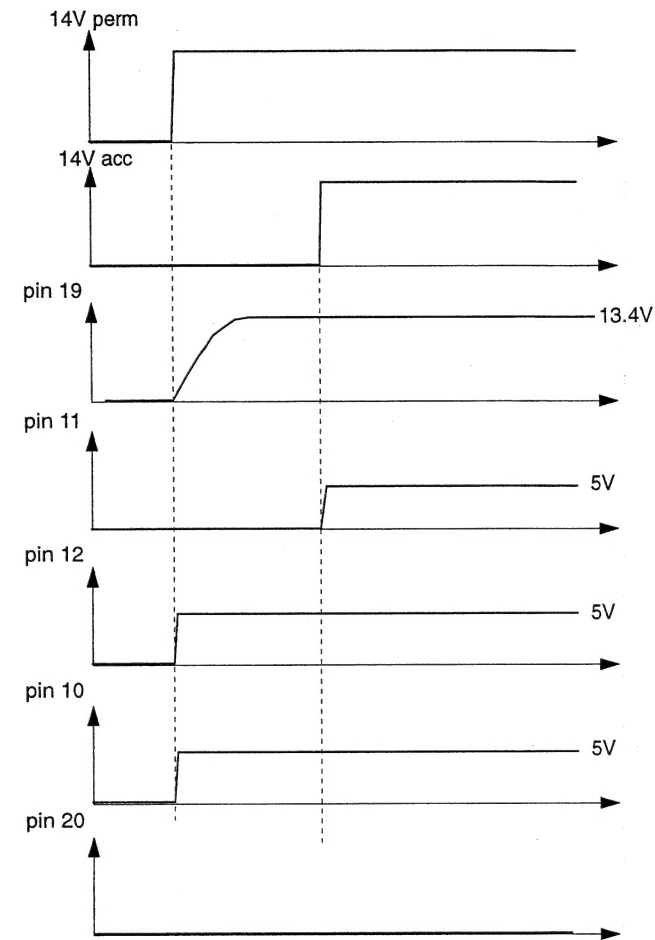
- ☐ Ignition key
- ☐ OnOff key
- ☐ Tape / CD insert
- ☐ Tape / CD eject
- ☐ Low voltage (V_LOW) - transition low to high voltage
- ☐ Front detection

Via the different interface the inputs are connected to one of the two inputs of the reset circuitry (Pin 4 or 11 of 7402)

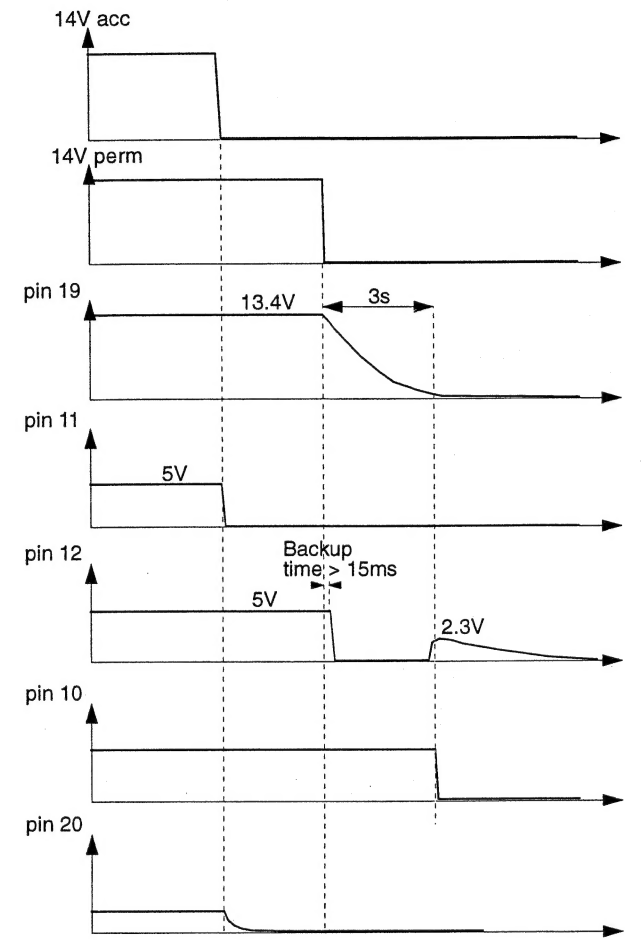
With a transition on any of the input lines, a 1ms duration reset (RESET_uC in schematic PS01) is generated, which leads to wake up the micro p. from the power down mode. At the same time, the reset will be disabled. The micro p. is then able to check the reset origin and to decide at least if the set must switch on or not.

Waveforms on IC 7401 L4949N

1) Set OFF



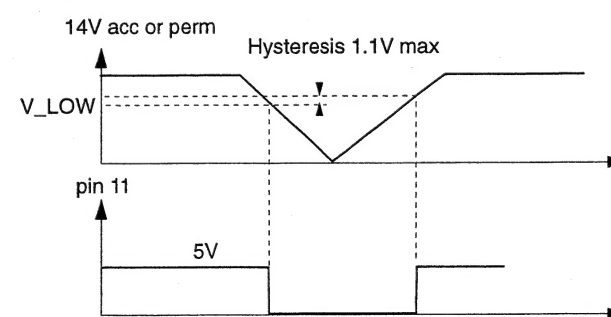
2) Set ON



3) V_{LOW} handling

If a V_{LOW} occurs during set is On or during set On/Off procedure is performed, the micro p. switches Off the set and finishes the write EEprom activities. After this actin the hardware reset generation will be enabled and the micro p. goes to power down.

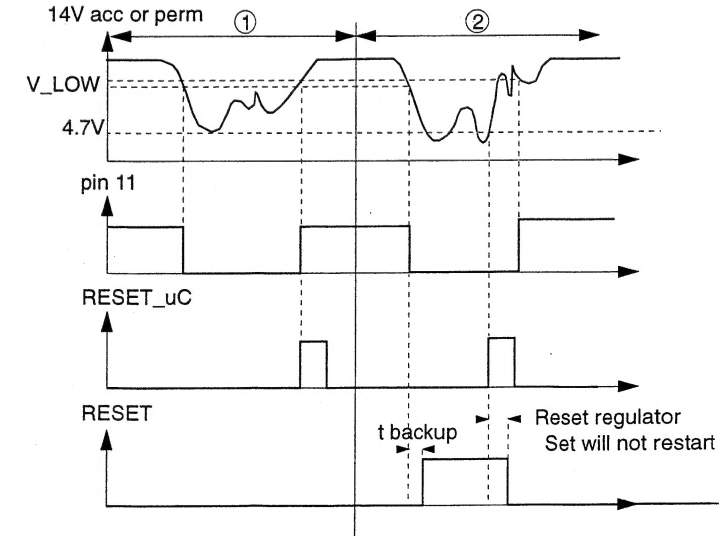
V_LOW handling



Case ① The set is On, the permanent supply falls down but is over 4.7V

Case ② The set is On, the permanent supply falls down below 4.7V for longer than backup time

Behaviour while engine start



DESCRIPTION OF THE CAR DIGITAL SIGNAL PROCESSOR (CDSP) SAA7701

The CDSP chip can perform all the signal functions in front of the power amplifier and behind the AM and FM demodulation and tape input. These functions are: interference absorption, stereo decoding, RDS decoding, weak signal processing (soft-mute, sliding stereo, etc...), Dolby-B tape noise reduction and the audio volume controls (volume, balance, fader, tone, dynamic compression). Some functions have been implemented in hardware and are not freely programmable. Digital audio signals from external sources with I2S format are accepted. There are four independent analog output channels. This enables separate tone and equalisation control for front and rear speakers.

The DSP can contain a basic program which enables already a set with AM/FM reception, sophisticated FM weak signal functions, MSS, Dolby-B tape noise reduction system, CD play with compressor function, separate bass and treble tone control and fader/balance control.

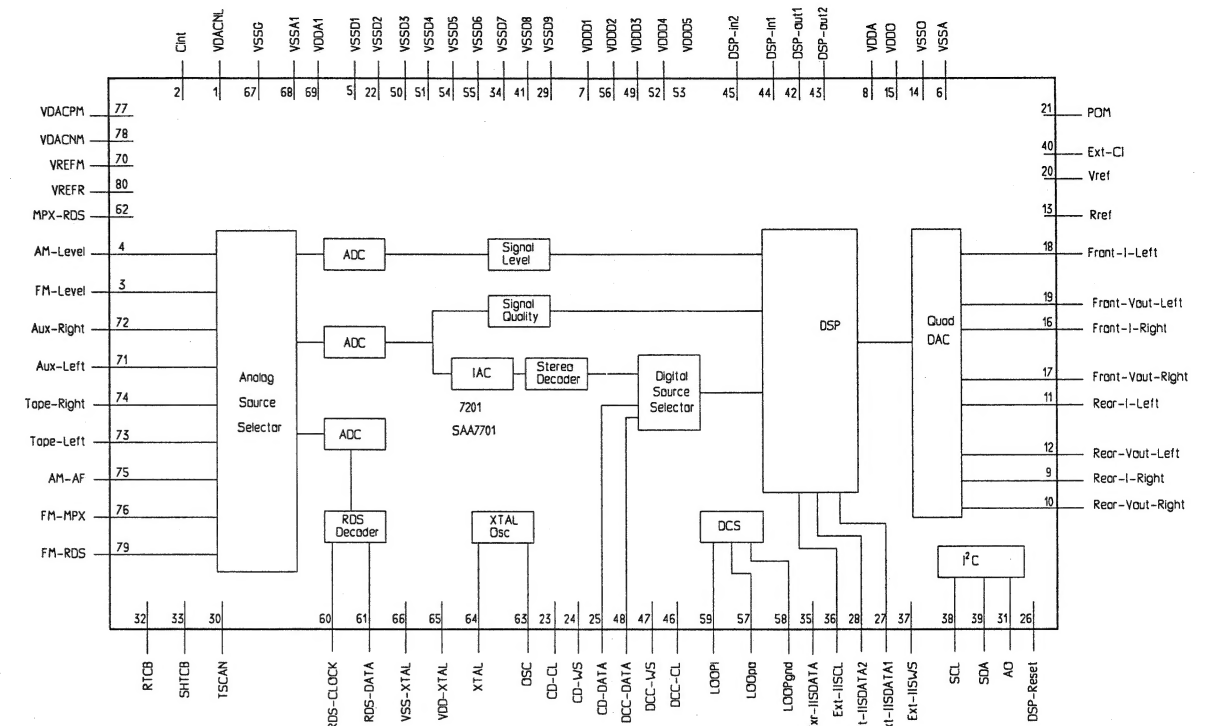
Hardware features

- Bit stream 3rd order Sigma-Delta A/D converters with anti aliasing broadband input filters
- D/A converters with four over sampling and noise shaping
- Digital stereo decoder
- Improved, digital IAC
- RDS processing with optional 16 bit buffer via separate channel (two tuner radio possible)
- Auxiliary analog CD input (CD-walkman, speech, economic CD-changer etc...)
- Two separate full I2S CD and DCC high performance interfaces
- Expandable with additional DSPs for sophisticated features through an I2S gateway
- Audio output short circuit protected
- I2C bus controlled
- Analog tape input
- -40 to +85° C operating temperature range

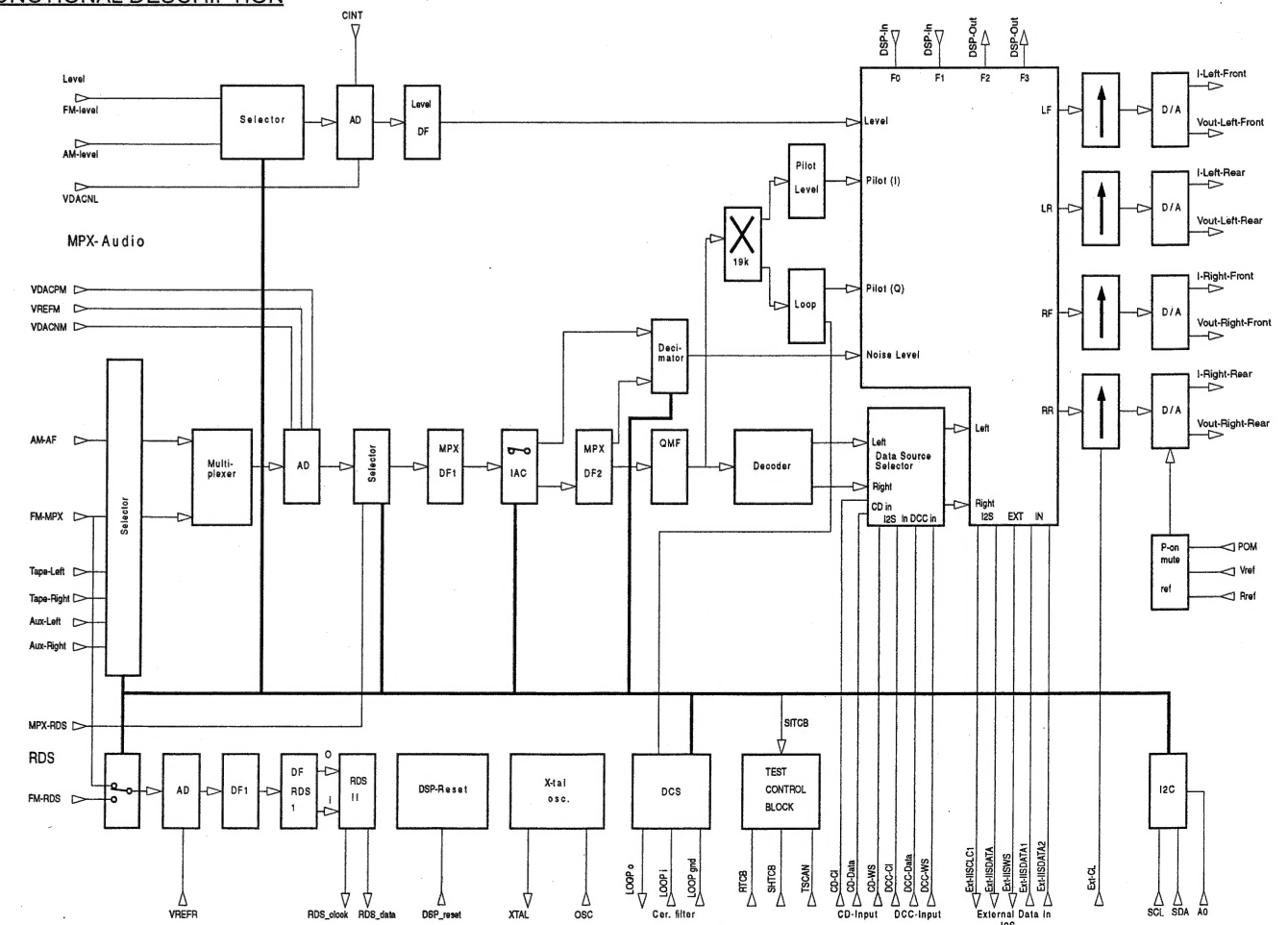
Software features

- Improved FM weak signal processing with more stereo
- Integrated 19KHz MPX filter and de-emphasis
- Electronic adjustments: FM/AM level, FM channel separation, Dolby level
- Baseband audio processing (treble/bass/balance/fader/volume)
- Dynamic loudness or bass boost
- Stereo 1 or 3 band parametric equaliser
- Automatic leveller (in combination with microprocessor)
- Tape equalisation (DCC analog playback)
- Music Search detection for tape (MSS)
- Pause detection for RDS updates
- Dolby-B tape noise reduction
- (adjustable) dynamic compressor
- CD/DCC De-emphasis processing
- Signal level, noise and multipath detection for RDS (I2C bus command)
- Hidden mute during RDS updates
- Improved AM reception

BLOCK DIAGRAM



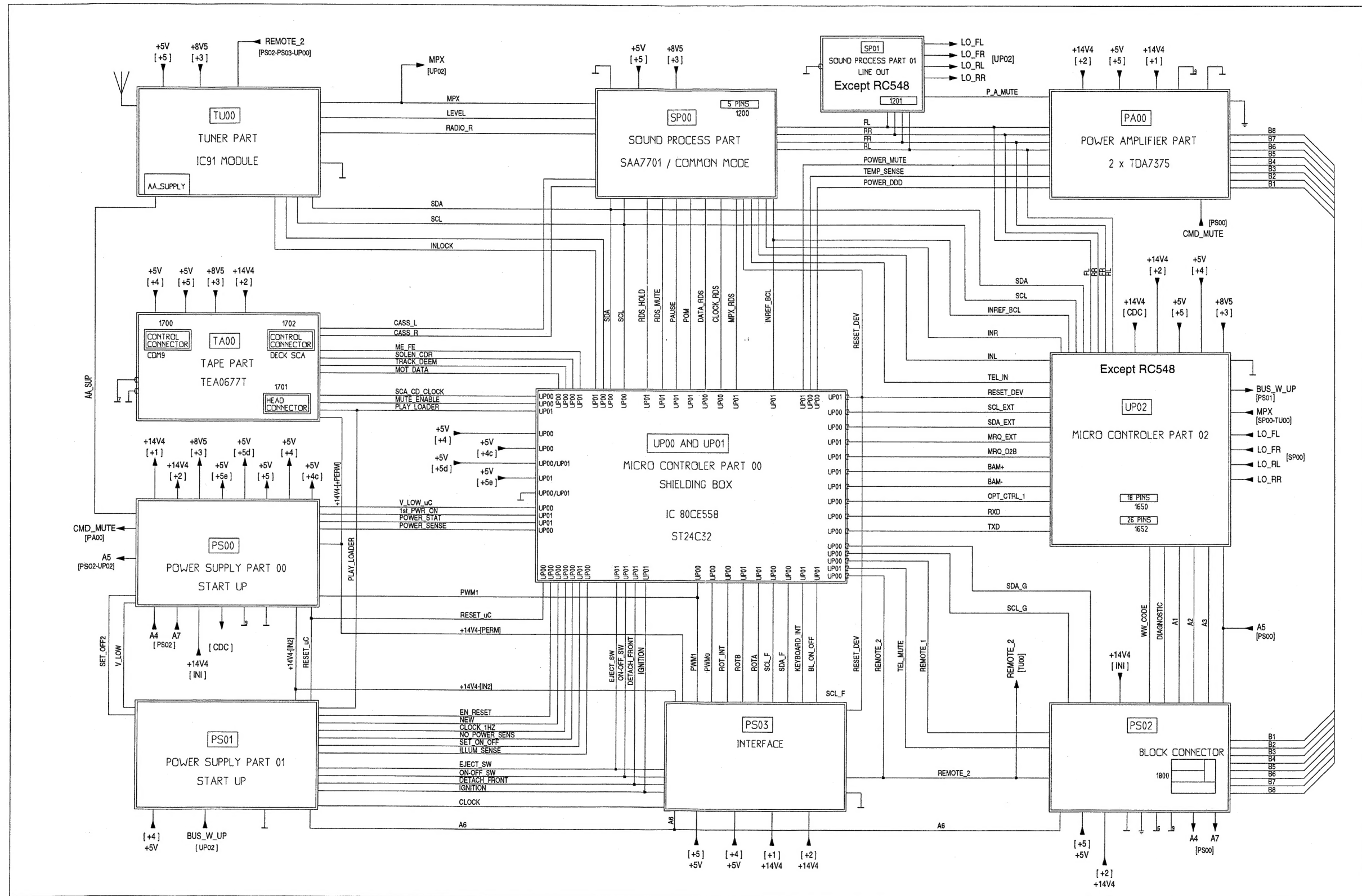
FUNCTIONAL DESCRIPTION



SYMBOL	PIN	DESCRIPTION
VDACNL	1	Ground Reference Level AD DAC LEVEL
CINT	2	Level AD switch mode integrator connection
FM-level	3	FM-level input pin. Via this pin the level of the received FM-radio signal is fed to the CDSP. The level information is needed for a correct functioning of the weak signal behaviour.
AM-level	4	AM-level input pin. Via this pin the level of the received AM-radio signal is fed to the CDSP.
VSSD1	5	Supply ground 1 digital circuitry DACs
VSSA	6	Supply ground analog circuitry DACs
VDDD1	7	Positive supply 1 digital circuitry DACs
VDDA	8	Positive supply analog circuitry DACs
Rear-I-Right	9	Analog audio current output for Rear-right speaker
Rear-Vout-Right	10	Analog audio voltage output for Rear-right speaker
Rear-I-Left	11	Analog audio current output for Rear-left speaker
Rear-Vout-Left	12	Analog audio voltage output for Rear-left speaker
Rref	13	Input for the internal reference current source of the D/A converter
VSSO	14	Supply ground for output Op-amps DAC
VDDO	15	Positive supply for output Op-amps DAC
Front-I-Right	16	Analog audio current output for Front-right speaker
Front-Vout-Right	17	Analog audio voltage output for Front-right speaker
Front-I-Left	18	Analog audio current output for Front-left speaker
Front-Vout-left	19	Analog audio voltage output for Front-left speaker
Vref	20	Voltage input for the internal reference buffer amplifier of the D/A converter.
POM	21	Activates the Power On Mute. Timing is determined with an external capacitor.
VSSD2	22	Ground supply 2 digital circuitry
CD-CI	23	I ² S Clock input CD digital audio source. Also reference for 4* asf and asf. Selected if DIV-EXT/INT is not set. / Output LIRS scan chain 6
CD-WS	24	I ² S Word Select Input CD digital audio source / Input LIRS scan chain 6
CD-Data	25	I ² S Left/Right Data Input CD digital audio source / Input LIRS scan chain 1
DSP-reset	26	Input to reset DSP-core (active low) / input LIRS scan chain 3
Ext_IISDATA1	27	I ² S External Input Data channel 1 (front) from extra DSP chip / input CORE scan chain DIO
Ext_IISDATA2	28	I ² S External Input Data channel 2 (rear) for extra DSP chip
VSSD9	29	Ground supply 9 digital circuitry
TSCAN	30	Scan control (active high)
A0	31	Slave sub-address I ² C selection / Serial data input test control block (SITCB)
RTCB	32	Asynchronous Reset test control block (active high)
SHTCB	33	Shift clock test control block (active high)
VSSD7	34	Ground supply 7 digital circuitry
Ext_IISDATA	35	I ² S External Output Data for extra DSP chip / output LIRS scan chain 4; controlled by ENA_IIS (bit 13)
Ext_IISCL	36	I ² S External Output Clock for extra DSP chip / output LIRS scan chain 3; controlled by ENA_IIS (bit 13)
Ext_IISWS	37	I ² S External input/output Word select for extra DSP chip / output CORE scan chain DIO; controlled by ENA_IIS (bit 13)
SCL	38	Serial clock input (I ² C bus) / input LIRS scan chain 4
SDA	39	Serial data input/output (I ² C bus)
EXT-CI	40	External reference clock input to generate 4*asf and ASF synchronisation. To be used in case the I ² S clock inputs are not suitable. Selection if DIV-EXT/INT is set / Latch signal DAC data words in analog test mode.
VSSD8	41	Ground supply 8 digital circuitry
DSP_out1	42	Digital output 1 from DSP-core (F2 of status register) / output CORE scan chain (tri-state for Debug board)
DSP_out2	43	Digital output 2 from DSP-core (F3 of status register) / IAC trigger output / output DAC scan chain 1; activated by AGC_TRIG (bit 15)

SYMBOL	PIN	DESCRIPTION
DSP_in1	44	Digital input 1 for DSP-core (F0 of status register) / input LIRS scan chain 2
DSP_in2	45	Digital input 2 for DSP-core (F1 of status register) / input CORE scan chain
DCC-CI	46	I ² S Clock input DCC digital audio source. Also reference for 4*asf and asf. Selected if DIV-EXT/INT is not set. / Input DAC digital scan chain 1 / input DAC analog scan chain LEFT / input external MPX ADC if SEL-EXT/ADC is set.
DCC-WS	47	I ² S Word Select input DCC digital audio source / input DAC digital scan chain 2 / input DAC analog scan chain RIGHT / input external RDS ADC if SEL-EXT/ADC is set.
DCC-Data	48	I ² S Left/RIGHT Data input DCC digital audio source / output LIRS scan chain 5 / input external LEVEL ADC if SEL-EXT/ADC is set.
VDDD3	49	Positive supply 3 digital circuitry
VSSD3	50	Ground supply 3 digital circuitry
VSSD4	51	Ground supply 4 digital circuitry
VDDD4	52	Positive supply 4 digital circuitry
VDDD5	53	Positive supply 5 digital circuitry
VSSD5	54	Ground supply 5 digital circuitry
VSSD6	55	Ground supply 6 digital circuitry
VDDD2	56	Positive supply 2 digital circuitry
LOOPo	57	Unfiltered DCS clock output / output DAC scan chain 2 / LEVEL A/D bitstream output in analog A/D test mode / bit slicer output in slicer test mode
LOOPgnd	58	Ground connection DCS filter
LOOPi	59	Filtered DCS clock input / Bit slicer input in slicer test mode
RDS-Clock	60	Radio Data System bit clock output / output LIRS scan chain 1 / MPX A/D bitstream output in analog AD test mode / RDS external clock input; controlled by SEL-BUF/BUF (bit 7) / X-tal output in slicer test mode.
RDS-Data	61	Radio Data System data output / output LIRS scan chain 2 / RDS A/D bitstream output in analog AD test mode
MPX-RDS	62	Selects in FM-mode between FM-MPX and RDS-MPX input signal to the MPX decimation filter / input LIRS scan chain 5 / input A/D scan chain in analog test mode
OSC	63	Crystal oscillator output: Drive output to 36.860 MHz crystal or forced input in slave mode
XTAL	64	Crystal oscillator input: local crystal oscillator sense
VDD_XTAL	65	Positive supply X-TAL circuitry
VSS_XTAL	66	Ground supply X-TAL circuitry
VSSG	67	Ground guards ADs
VSSA1	68	Ground supply ADs analog
VDDA1	69	Positive supply ADs analog
VREFM	70	Mid ref voltage MPX AD and buffers
Aux-Left	71	Analog input pin for Auxiliary-Left signal
Aux-Right	72	Analog input pin for Auxiliary-Right signal
Tape-Left	73	Analog input pin for Tape-Left signal
Tape-Right	74	Analog input pin for Tape-Right signal
AM-AF	75	Analog input pin for AM audio frequency
FM-MPX	76	Analog input pin for FM-Multiplex signal
VDACPM	77	Positive reference voltage AD DAC MPX and RDS
VDACNM	78	Ground reference voltage AD DAC MPX and RDS
FM-RDS	79	Analog FM-MPX input pin for RDS decoding
VREFR	80	Mid ref voltage RDS AD, LEVEL AD and buffers

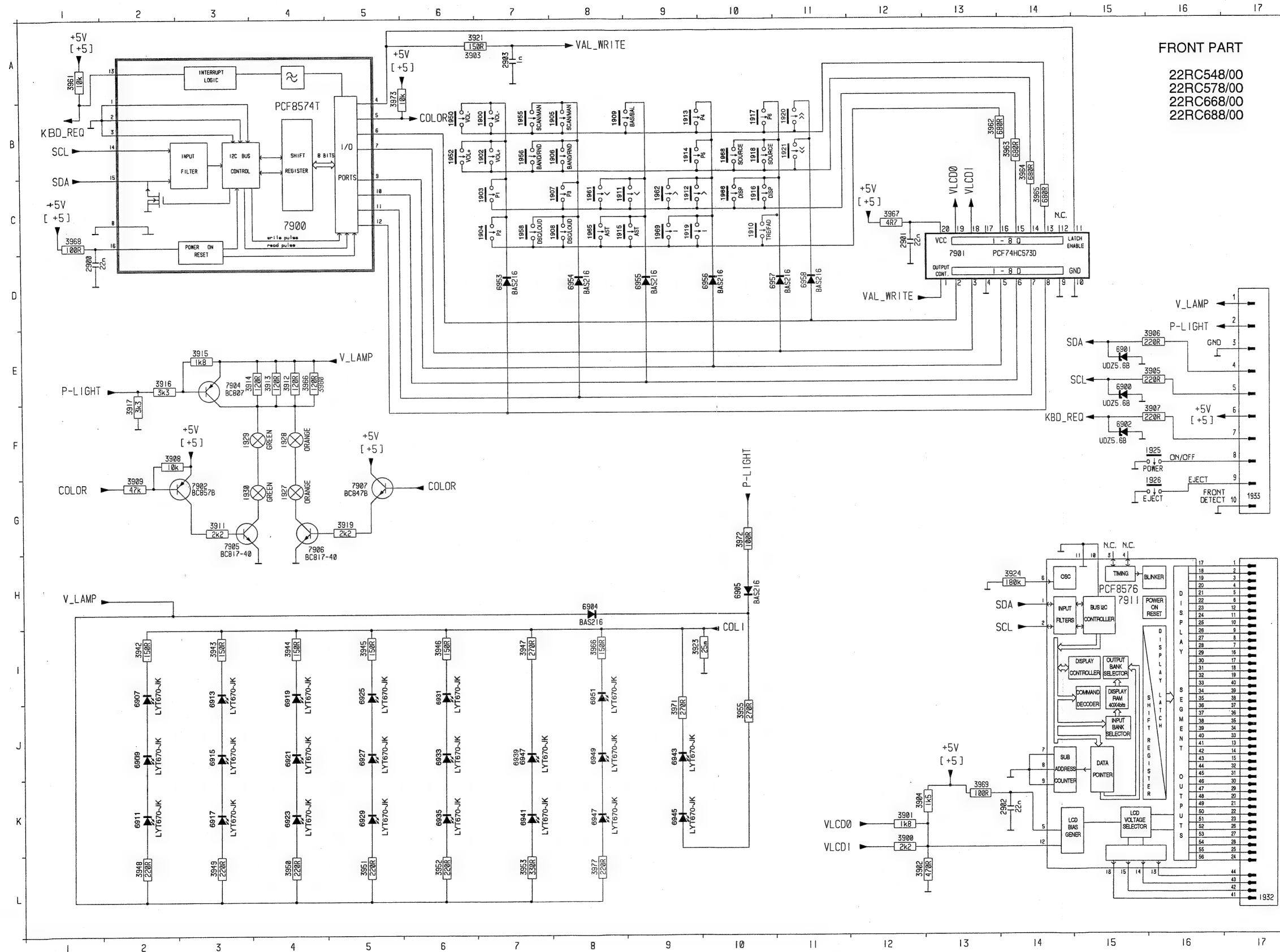
Explanation: LIRS is the abbreviation of the level, IAC, RDS and Stereo decoder part.



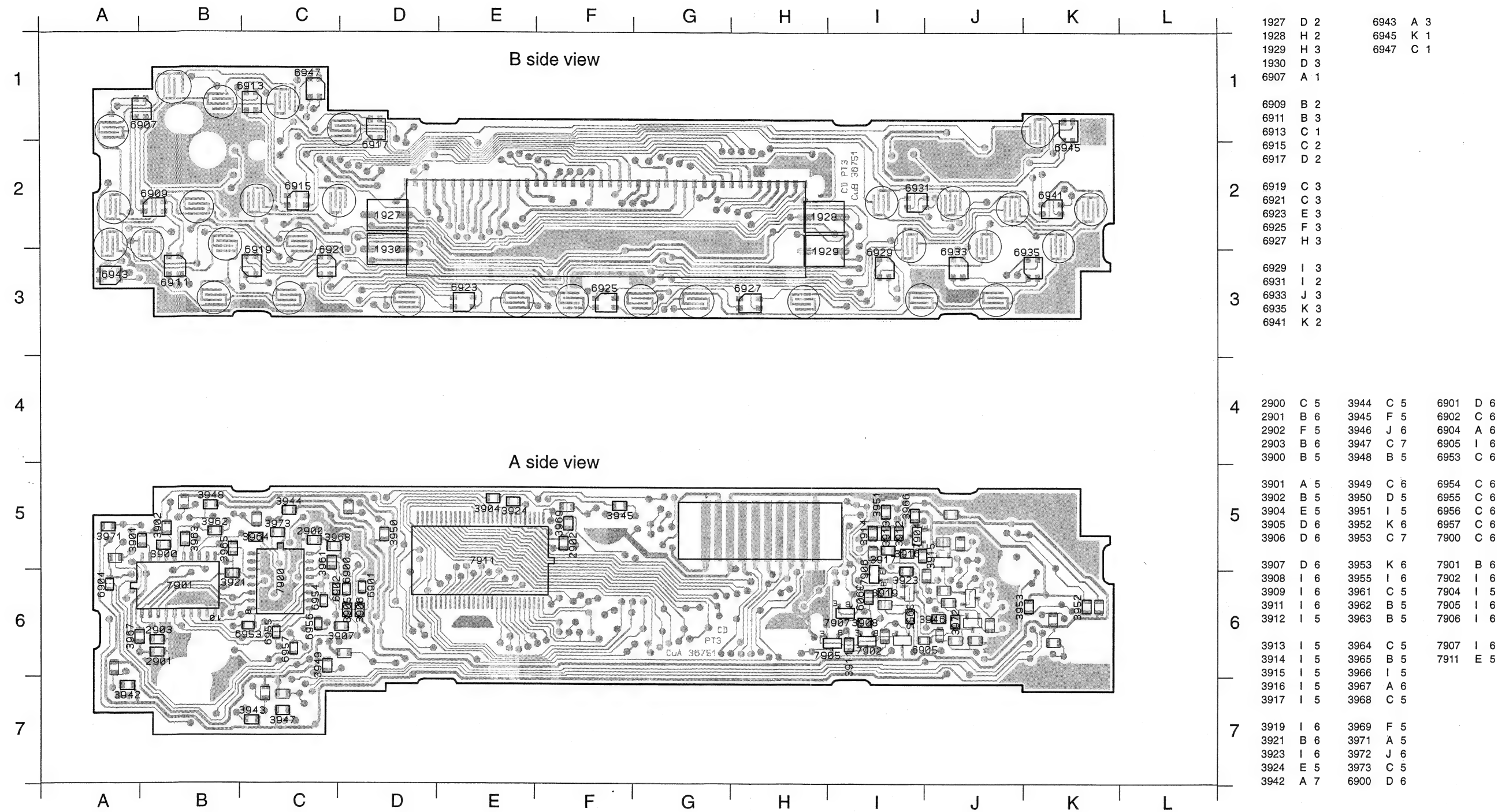
ELECTRICAL BLOC DIAGRAM

22DC548/00
22DC578/00
22DC668/00
22DC688/00

IN BLUE: COMPONENTS FOR 22RC668/688 ONLY



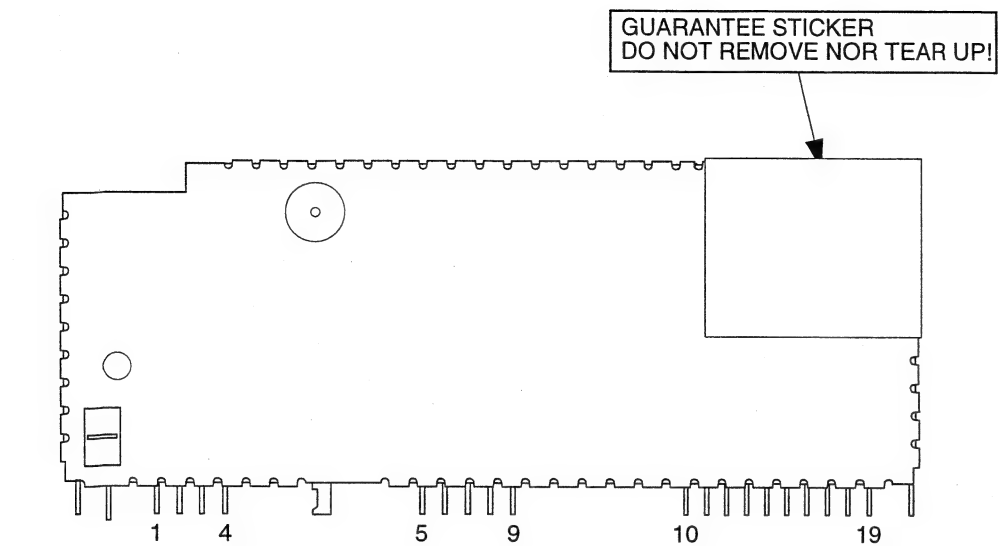
DETACHABLE FRONT PWB FOR 22RC668 - 22RC688



1927	D 2	6941	K 2
1928	H 2	6943	A 3
1929	H 2	6945	J 1
1930	D 2	6947	K 1
6907	A 1	6949	K 1
6909	B 2	6951	I 2
6911	C 1		
6913	D 1		
6915	C 2		
6917	D 1		
6919	B 3		
6921	C 3		
6923	C 3		
6925	E 3		
6927	F 3		
6929	H 3		
6931	I 2		
6933	I 3		
6935	J 3		
6939	K 3		
2900	C 5	3943	D 7
2901	A 5	3944	B 5
2902	F 2	3945	D 5
2903	B 5	3946	I 6
3900	B 5	3947	K 6
3901	B 5	3948	B 7
3902	B 5	3949	D 7
3903	B 6	3950	D 5
3904	B 5	3951	I 5
3906	D 5	3952	J 5
3906	D 6	3953	K 6
3907	D 6	3955	I 5
3908	J 6	3961	C 5
3909	J 6	3962	B 5
3911	I 6	3963	B 5
3912	I 5	3964	C 5
3913	I 5	3965	B 6
3914	I 5	3966	I 6
3915	I 5	3967	A 5
3916	I 5	3968	C 5
3917	I 5	3969	F 2
3919	J 6	3971	A 6
3923	J 6	3972	I 5
3924	F 2	3973	I 6
3942	A 7	3977	J 7

IC96 MODULE

Not reparable module. Do not open and do not try to repair yourself!



Connections

- | | |
|-----------------------|----------------------------------|
| 1 AM/FM Aerial input | 10 Multiplex / RDS output signal |
| 2 Ground | 11 Unweighted level output |
| | 12 I ² C SDA |
| 5 Inlock detector pin | 13 I ² C SCL |
| 6 Vcc 8.5V | 14 SDS time constant pin |
| 7 Ground | 17 Ground |
| 8 Vcc 5.0V | 19 AM audio output |
| 9 V reference | |

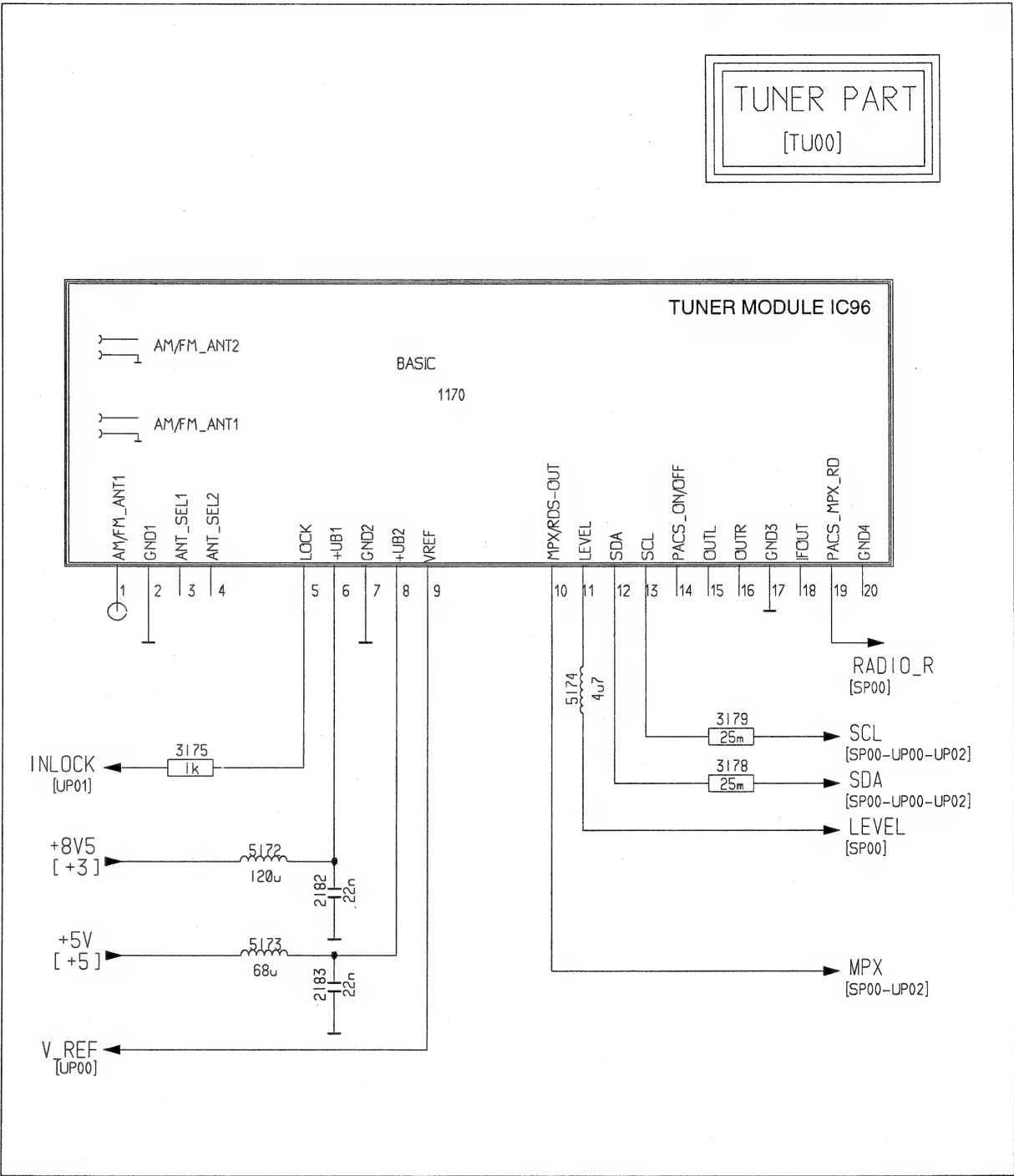
Quick reference data:

1) AM part

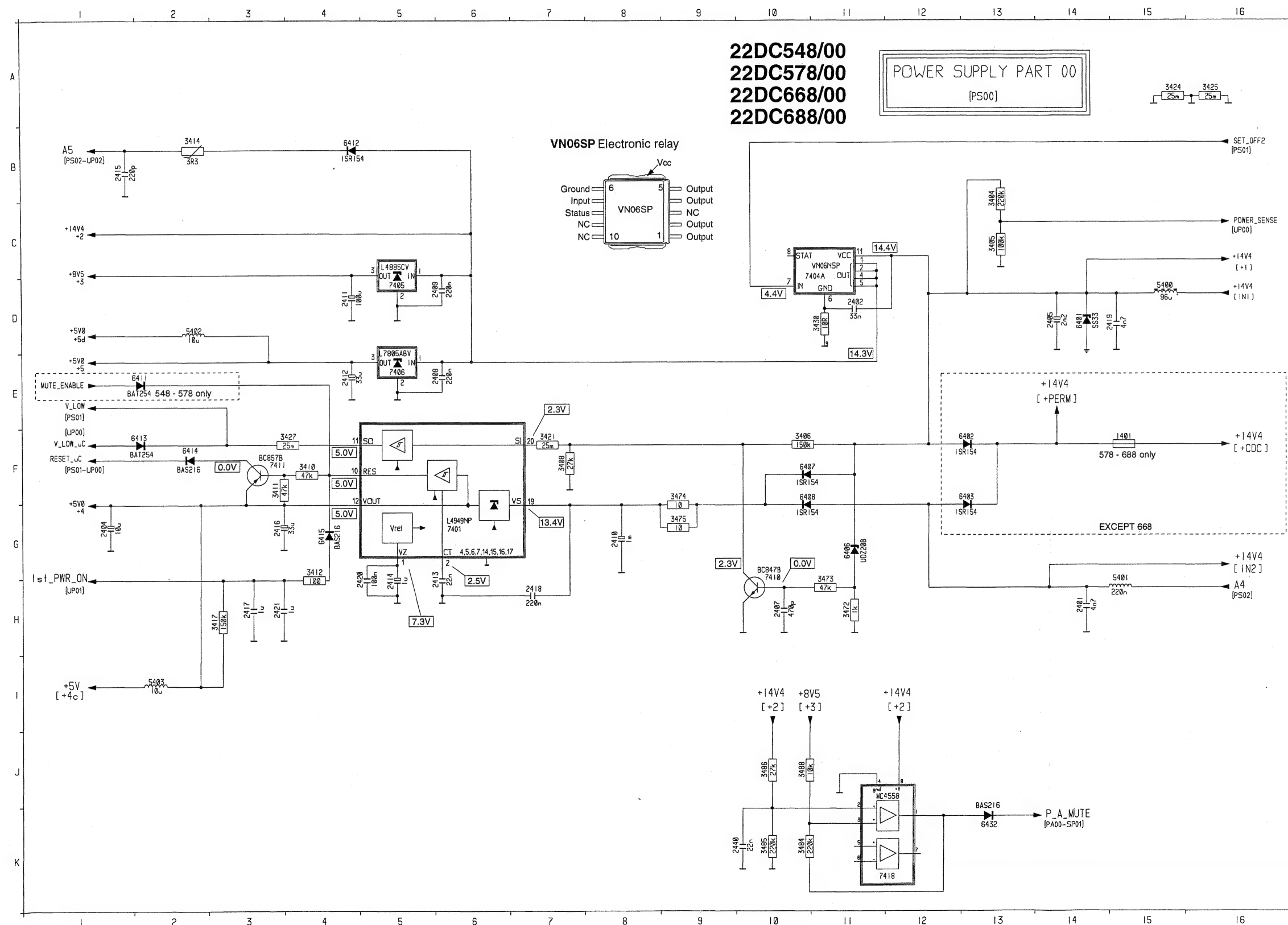
- Longwave/Mediumwave 144-1710 KHz (inclusive USA)
- Shortwave 5850-6250 KHz - 49 meter band
- AM double super concept
- AM IF1 10.7MHz
- AM IF2 450KHz
- First VCO frequency above input signal frequency
- Second X-tal oscillator frequency below IF1
- Usable sensitivity $\alpha 26\text{dB}$ MW = 14 μV typ.

1) FM part

- FM 87.5 - 108MHz
- FM double super concept
- FM IF1 72.2MHz
- FM IF2 10.7MHz
- First VCO frequency above input signal frequency
- Second X-tal oscillator frequency below IF1
- Usable sensitivity $\alpha 26\text{dB}$ $\approx 2.5\mu\text{V}$ typ.
- THD 1mV $\delta f = 75\text{KHz}$ = 0.5% typ
- Signal to noise ratio = 65dB typ
- Locktime synthesizer <2mSec

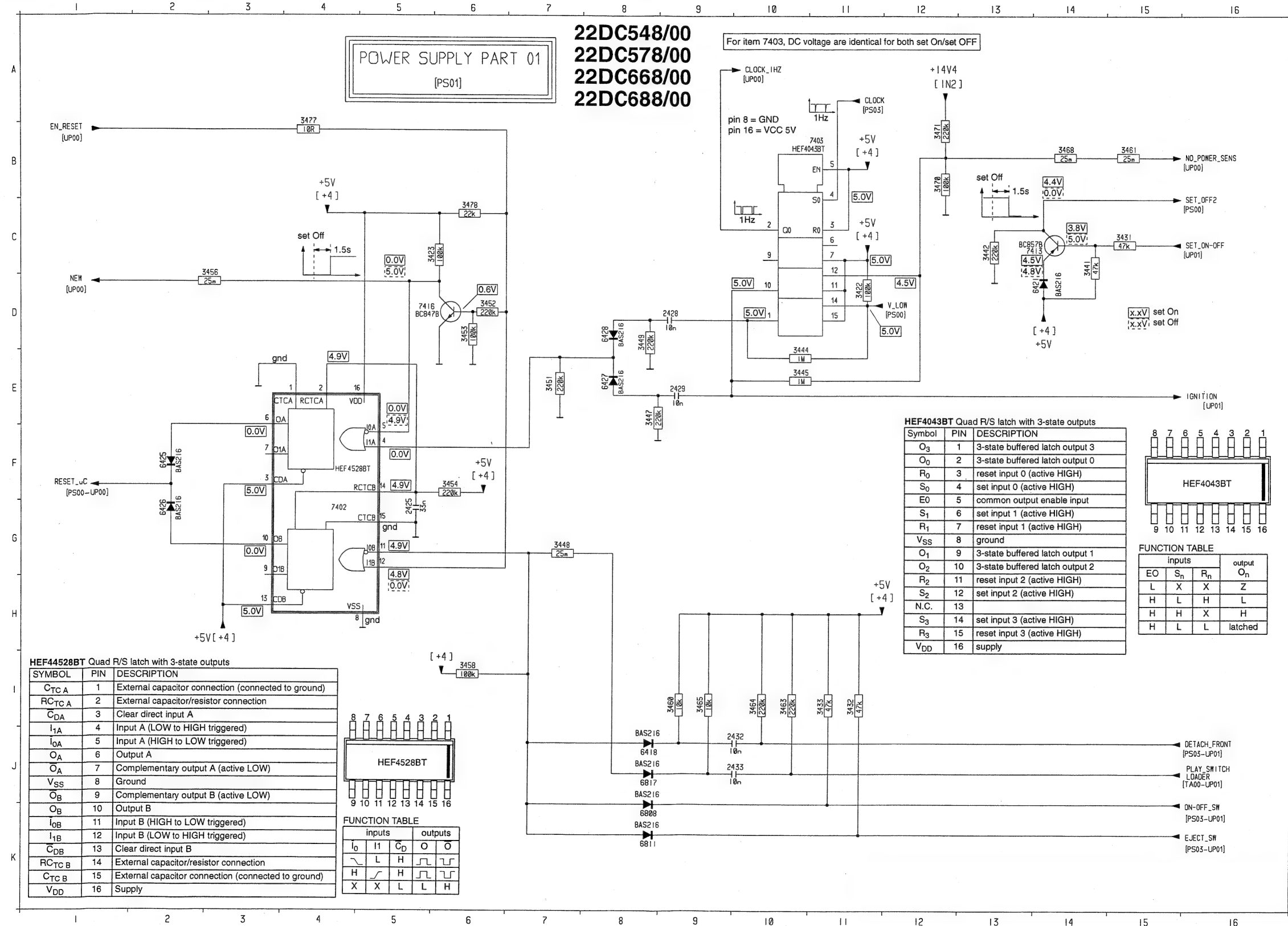


A4H16
 A5B1
 Ist_PWR_ONG1
 MUTE_ENABLEE1
 POWER_SENSEC16
 P_A_MUTEK14
 RESET_ucF1
 SET_OFF2B16
 V_LOWE1
 V_LOW_ucF1



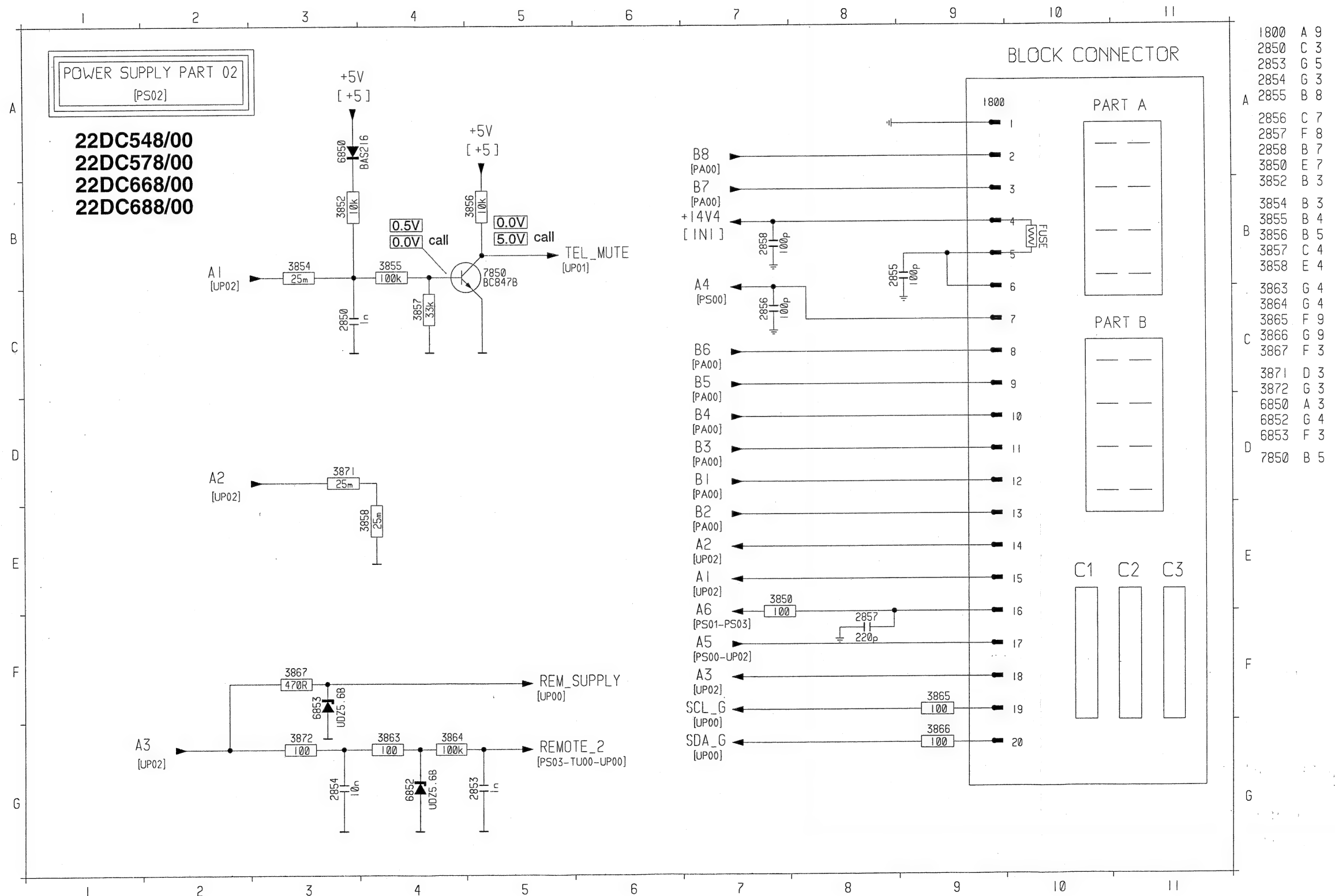
1401 F15
 2401 H14
 2402 D11
 2404 G1
 A 2405 D14
 2407 H10
 2408 E6
 2409 D6
 2410 G8
 2411 D4
 2412 E4
 B 2413 H6
 2414 H5
 2415 B1
 2416 G3
 2417 H3
 2418 H7
 C 2419 D15
 2420 H5
 2421 H3
 2440 K10
 3404 B13
 3405 C13
 D 3406 F10
 3408 F7
 3410 F4
 3411 F3
 3412 G4
 3414 B2
 E 3417 H3
 3421 F7
 3424 A15
 3425 A16
 3427 F4
 3430 D11
 F 3472 H11
 3473 H11
 3474 F9
 3475 G9
 3484 K10
 3485 K10
 G 3486 J10
 3488 J10
 5400 D15
 5401 H15
 5402 D2
 5403 I2
 H 6401 D14
 6402 F13
 6403 F13
 6406 G11
 6407 F10
 6408 F10
 I 6411 E2
 6412 B4
 6413 F2
 6414 F2
 6415 G4
 6432 K13
 J 7401 G6
 7404 D10
 7405 D5
 7406 E5
 7410 H10
 7411 F3
 7418 K11
 K

CLOCKA11
CLOCK_1HZA10
DETACH_FRONTI15
EJECT_SWK15
EN_RESETB1
IGNITIONE15
NEWD1
NO_POWER_SENSB15
ON_OFF_SWJ15
PLAY_SWITCH/
LOADERJ15
RESET_UCF1
SET_OFF2B15
SET_ON_OFFC15
V_LOWD11

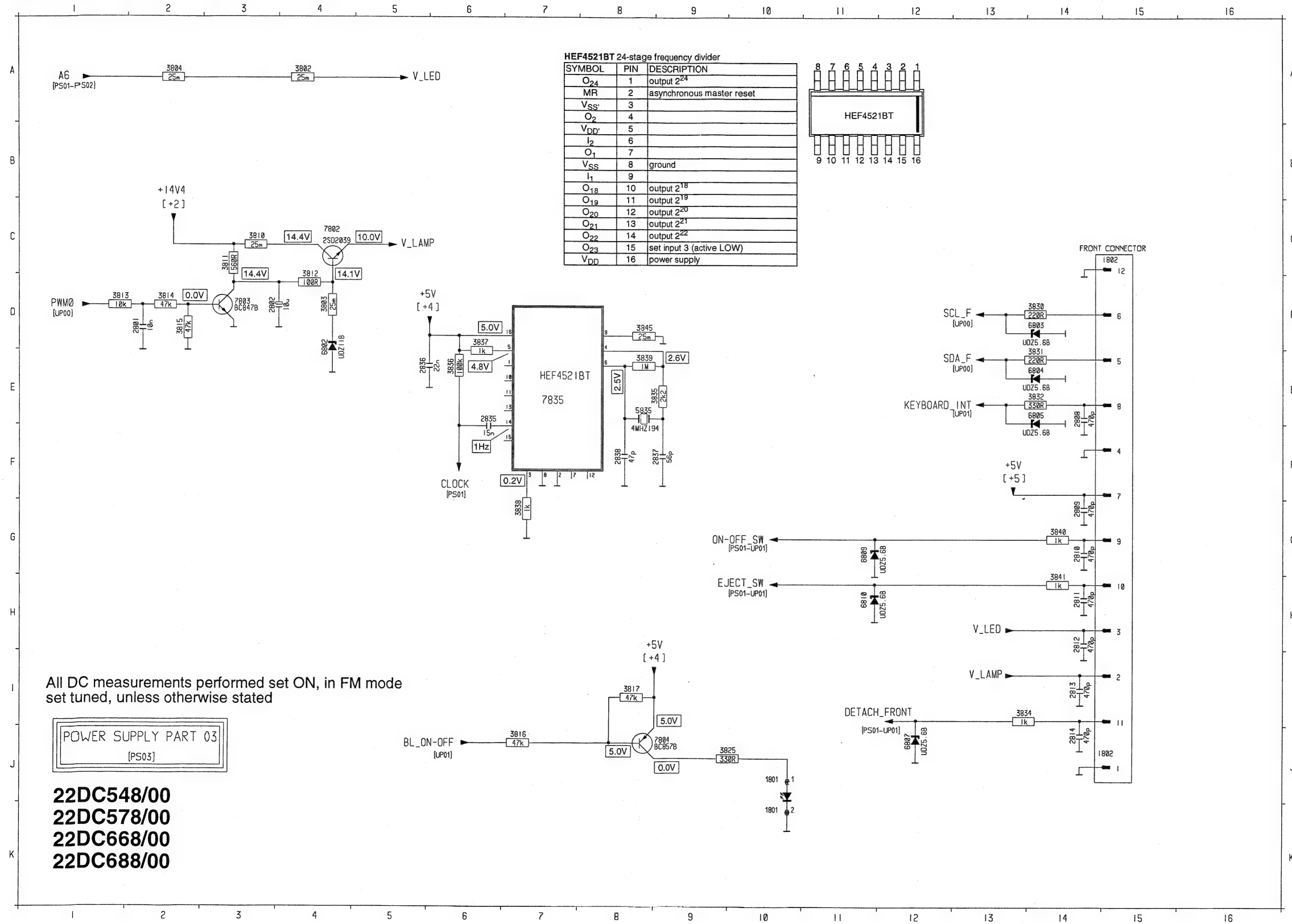


2425 G 5
2428 D 9
2429 E 9
2432 J10
2433 J10
3422 D11
3423 C 5
3431 C15
3432 I11
3433 I11
3441 C14
3442 C13
3444 E10
3445 E10
3447 E 8
3448 G 7
3449 D 8
3451 E 7
3452 D 6
3453 D 6
3454 F 6
3456 D 3
3458 I 6
3460 I 9
3461 B15
3463 I10
3464 I10
3465 I 9
3468 B14
3470 B12
3471 B12
3477 B 4
3478 C 6
6418 J 8
6421 D14
F 6425 F 2
6426 G 2
6427 E 8
6428 D 8
6808 K 8
6811 K 8
6817 J 8
7402 G 4
7403 B11
7413 C14
7416 D 6

A1	B2/E7	B1	D7	B7	B7
A2	E7/D2	B2	E7	B8	A7
A3	F7/G2	B3	D7	REMOTE_2	G5
A4	B7	B4	D7	REM_SUPPLY	F5
A5	F7	B5	C7	SCL_G	F7
A6	E7	B6	C7	SDA_G	G7

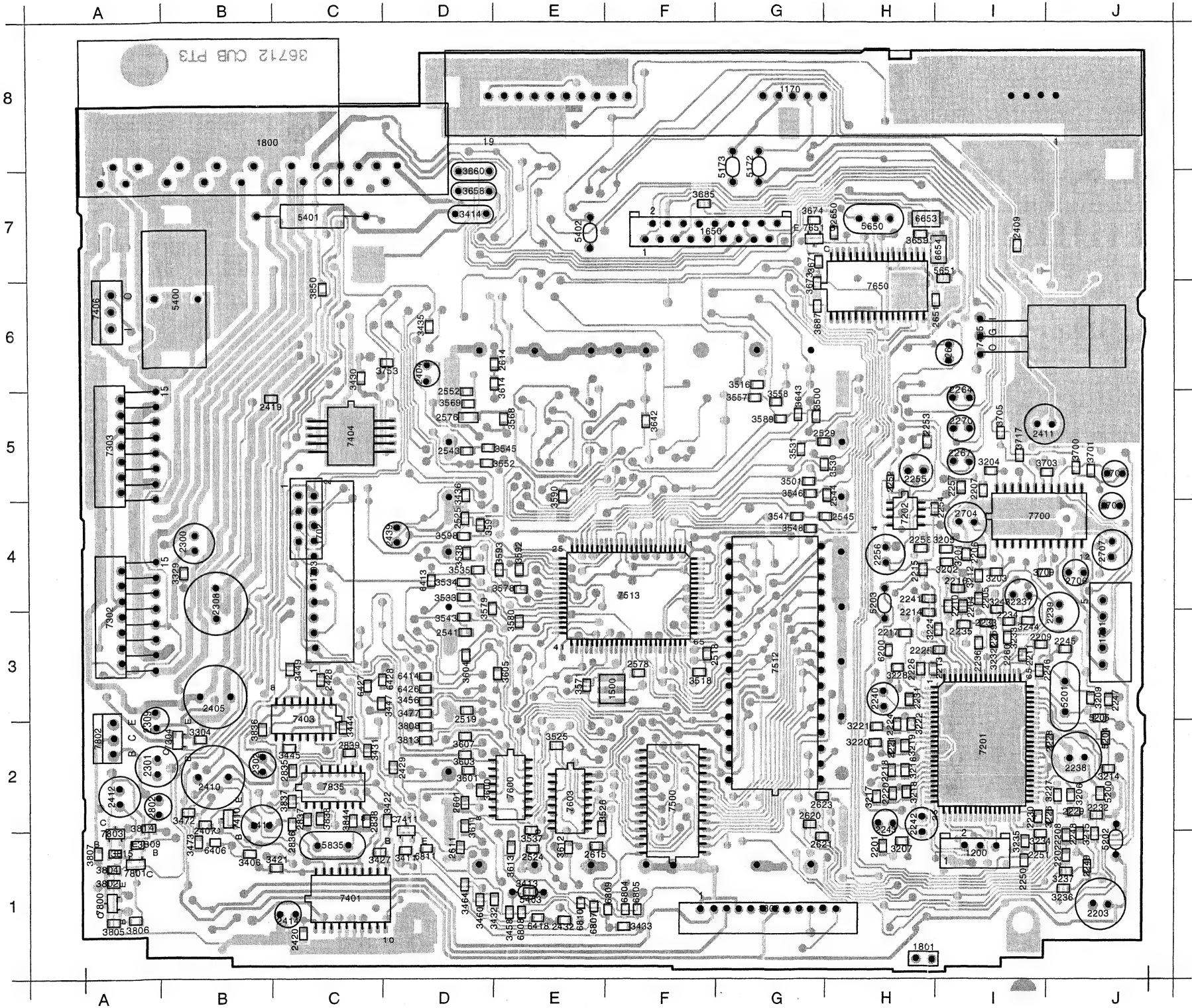


A6 A1
 BL_ON-OFF J6
 CLOCK F6
 DETACH_FRONT I12
 EJECT_SW H10
 KEYBOARD_INT E13
 ON-OFF_SW G10
 PWM0 D1
 SCL_F D13
 SDA_F E13
 V_LAMP C5/I13
 V_LED A5/H13



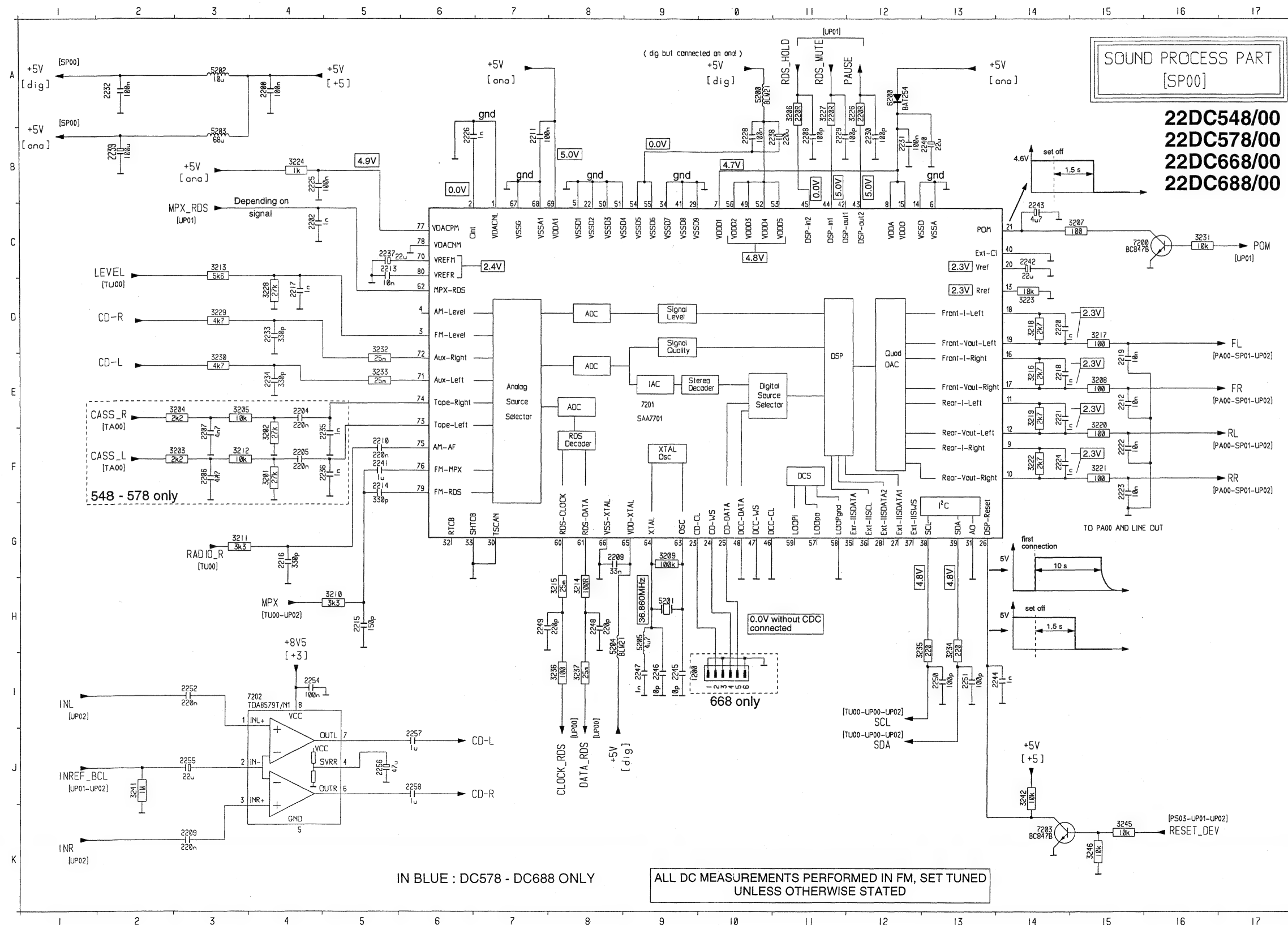
MAIN PWB LAYOUT. TOP SIDE VIEW

22RC548/00
22RC578/00
22RC668/00
22RC688/00



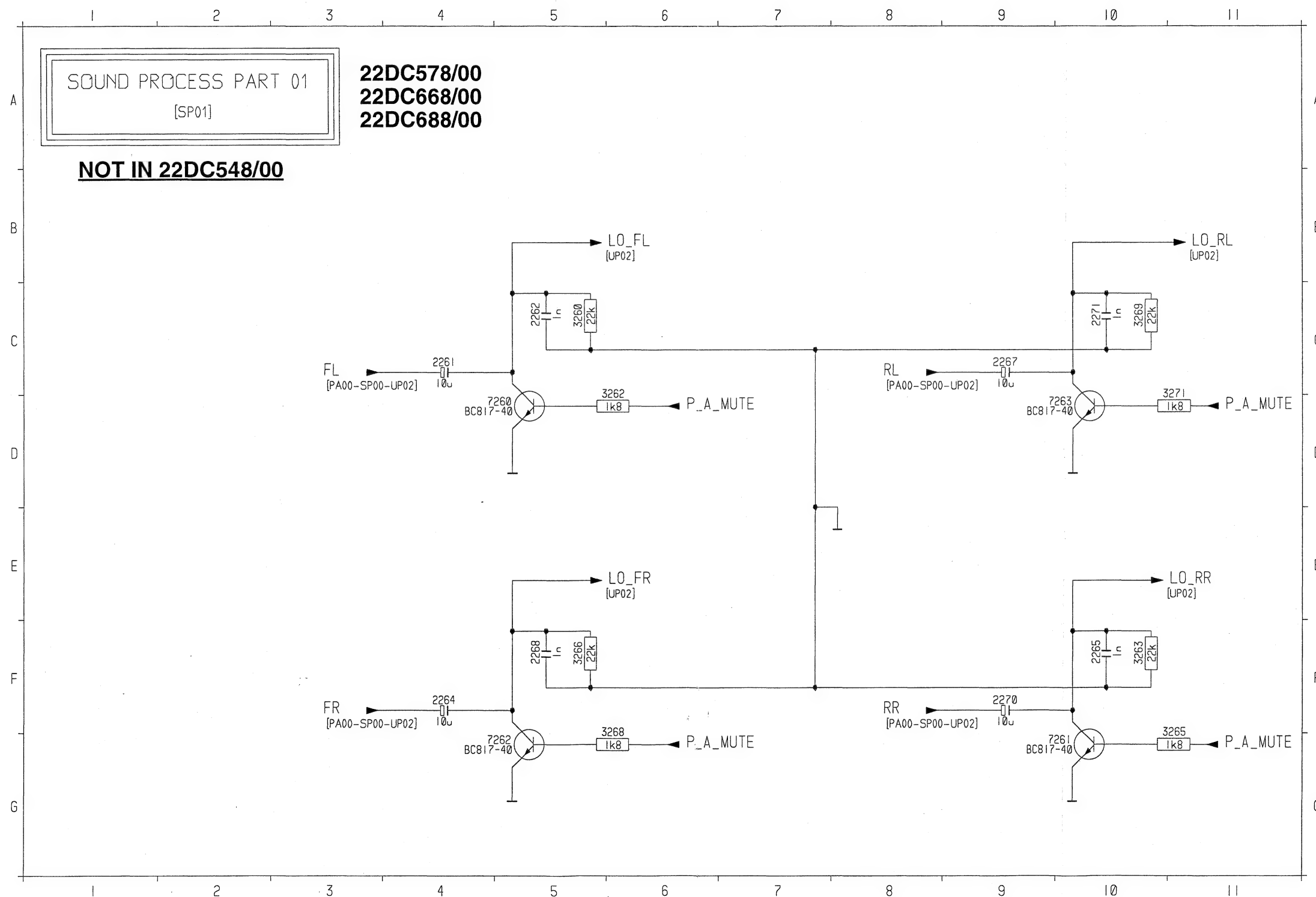
1170	G 8	2410	B 2	3413	E 1	3703	I 5
1200	I 2	2411	I 5	3414	D 7	3705	I 5
1500	F 3	2412	A 2	3421	C 1	3709	I 4
1650	F 7	2414	C 1	3422	D 2	3717	I 5
1701	J 4	2416	B 2	3427	C 2	3753	D 6
1702	C 5	2419	B 6	3430	C 6	3802	A 1
1703	C 4	2420	C 1	3431	C 2	3804	A 1
1800	B 8	2428	C 3	3432	E 1	3805	A 1
1801	H 1	2429	D 2	3433	F 1	3806	A 1
1802	G 1	2432	E 1	3435	D 6	3807	A 2
2201	H 2	2439	D 4	3436	D 5	3808	D 3
2202	J 1	2518	F 3	3444	C 3	3809	A 2
2203	J 1	2519	D 3	3445	C 2	3813	D 3
2204	I 4	2524	E 2	3447	C 3	3814	A 2
2205	I 4	2525	D 5	3449	C 3	3815	A 2
2206	I 4	2529	G 5	3456	D 3	3836	B 3
2207	I 5	2541	D 4	3458	E 1	3837	C 2
2208	J 2	2543	D 5	3460	D 1	3838	C 2
2209	I 3	2544	H 5	3464	D 1	3844	C 2
2210	I 4	2545	G 5	3472	B 2	3850	C 7
2211	I 3	2552	D 6	3473	B 2	5172	G 8
2213	H 3	2576	D 5	3477	D 3	5173	G 8
2214	H 4	2578	F 3	3500	G 5	5200	J 2
2215	H 4	2601	D 2	3501	G 5	5201	J 3
2216	I 4	2611	D 2	3516	G 6	5202	J 2
2217	H 4	2614	D 6	3518	F 3	5203	H 4
2218	H 2	2615	E 2	3525	E 2	5204	J 3
2220	H 2	2620	G 2	3526	E 2	5205	J 3
2221	H 2	2621	G 2	3530	G 5	5400	B 7
2224	H 3	2623	G 2	3531	G 5	5401	C 7
2225	I 3	2650	H 7	3533	D 4	5402	E 7
2226	H 3	2651	H 7	3534	D 4	5403	E 1
2228	J 3	2700	J 5	3535	D 4	5650	H 7
2229	J 2	2701	J 5	3537	E 2	5651	I 7
2230	I 2	2704	I 5	3538	D 4	5835	C 2
2231	H 3	2706	J 4	3543	D 4	6200	H 3
2232	J 2	2707	J 4	3545	D 5	6406	B 2
2233	I 4	2802	A 2	3546	G 5	6413	D 4
2234	I 4	2835	C 2	3547	G 5	6414	D 3
2235	I 4	2836	C 2	3548	G 4	6418	E 1
2236	I 3	2837	C 2	3552	D 5	6426	D 3
2237	I 4	2838	C 2	3557	G 6	6427	C 3
2238	J 2	2839	C 2	3558	G 6	6428	C 3
2239	J 4	3201	I 4	3568	E 5	6653	H 7
2240	H 3	3202	I 4	3569	D 6	6654	I 7
2241	H 4	3203	I 4	3571	E 3	6804	F 1
2242	H 2	3204	I 5	3578	E 4	6805	F 1
2243	H 2	3205	I 4	3579	D 4	6807	E 1
2245	J 3	3206	J 2	3580	E 4	6808	E 1
2246	I 3	3207	H 2	3589	G 5	6809	F 1
2247	J 3	3209	J 3	3590	E 5	6810	E 1
2248	J 2	3212	I 4	3591	D 4	6811	D 2
2249	J 1	3214	J 2	3592	E 4	7201	I 2
2250	I 1	3215	J 2	3593	E 4	7202	H 5
2251	I 2	3216	H 2	3598	D 4	7302	A 4
2252	H 5	3217	H 2	3600	D 2	7303	A 5
2253	H 5	3218	H 2	3601	D 2	7304	B 3
2254	H 5	3219	H 2	3603	D 2	7401	C 1
2255	H 5	3220	H 3	3604	D 3	7403	C 3
2256	H 4	3221	H 3	3605	E 3	7404	C 5
2257	I 5	3222	H 3	3607	D 3	7405	I 6
2258	H 4	3224	I 4	3611	D 2	7406	A 6
2259	I 3	3226	J 2	3612	E 2	7410	B 2
2260	I 3	3227	J 2	3613	E 2	7411	D 2
2261	I 6	3228	H 3	3614	D 6	7500	F 2
2264	I 6	3232	I 3	3642	F 5	7512	G 3
2267	I 5	3233	I 3	3643	G 5	7513	F 4
2270	I 5	3234	I 2	3658	D 8	7600	E 2
2300	B 4	3235	I 2	3659	H 7	7603	E 2
2301	A 2	3236	J 1	3660	D 8	7650	H 7
2302	B 2	3237	J 1	3671	G 7	7651	G 7
2308	B 4	3243	I 4	3673	G 7	7700	I 5
2309	A 3	3244	I 4	3674	G 7	7800	A 1
2404	D 6	3304	B 3	3685	F 7	7801	A 1
2405	B 3	3329	B 4	3687	G 6	7802	A 3
2407	B 2	3406	B 2	3700	J 5	7803	A 2
2409	I 7	3411	D 2	3701	J 5	7835	C 2

CASS_LF2	FLD17	MPXH4	RDS_MUTEA11
CASS_RE2	FRE17	MPX_RDSC3	RESET_DEVK16
CD_LE2/J6	INLI1	PAUSEA12	RLF17
CD_RD2/J6	INRK1	POMC17	RRF17
CLOCK_RDSJ8	INREF_BCLJ1	RADIO_RG3	SCLI12
DATA_RDSJ8	LEVELC2	RDS_HOLDA11	SDAJ12



FLC3
FRF3
LO_FLB5
LO_FRE5
LO_RLB11
LO_RRE11

P_A_MUTED11/G11
P_A_MUTED6/G6
RLC8
RRF8

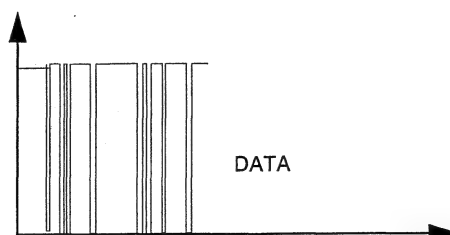


2261 C 4
2262 C 5
2264 F 4
2265 F10
2267 C 9
2268 F 5
2270 F 9
2271 C10
3260 C 5
3262 D 6
3263 F10
3265 G11
3266 F 5
3268 G 6
3269 C10
3271 D11
7260 D 5
7261 G10
7262 G 5
7263 D10

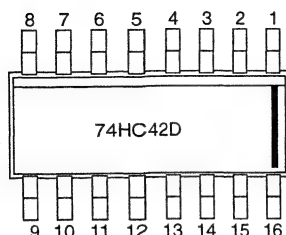


DC voltages of microprocessor (FM mode, set tuned)

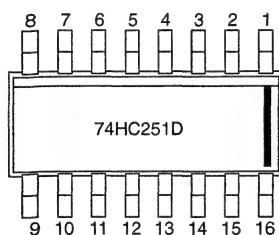
1	0.0V GND	41	N.C.
2	4.8V	42	N.C.
3	0.0V GND	43	5.0V \overline{TT} 1Hz
4	4.9V VDD	44	N.C.
5	4.8V	45	N.C.
6	N.C.	46	N.C.
7	4.0V	47	5.0V
8	0.6V	48	5.0V
9	4.5V	49	0.0V
10	4.4V	50	0.0V
11	N.C.	51	2.5V 16MHz
12	N.C.	52	2.1V 16MHz
13	0.0V GND	53	5.0V VDD
14	5.0 V VDD	54	GND
15	0.0V GND	55	DATA
16	0.0V	56	DATA
17	N.C.	57	DATA
18	0.0V	58	DATA
19	N.C.	59	DATA
20	N.C.	60	DATA
21	4.9V	61	DATA
22	4.2V	62	DATA
23	0.0V	63	2.5V
24	N.C.	64	1.6V
25	N.C.	65	0.0V
26	5.2V	66	5.0V VDD
27	0.0V	67	GND
28	5.0V VDD	68	DATA
29	0.0V GND	69	DATA
30	0.0V	70	DATA
31	N.C.	71	DATA
32	N.C.	72	DATA
33	5.0V	73	DATA
34	5.0V	74	DATA
35	5.0V	75	DATA
36	5.0V	76	5.0V VDD
37	5.0V	77	GND
38	4.8V	78	N.C.
39	5.0V	79	0.0V
40	4.8V	80	5.0V



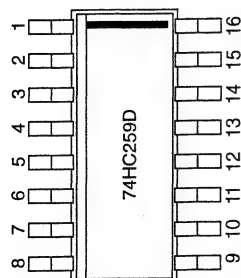
SYMBOL	PIN	DESCRIPTION
Y0 to Y9	1, 2, 3, 4, 5, 6 7, 9, 10, 11	Multiplexer outputs
GND	8	Ground (0V)
A0 to A3	15, 14, 13, 12	data inputs
VCC	16	positive supply voltage

[illegible]

SYMBOL	PIN	DESCRIPTION
I ₀ to I ₇	4,3,2,1,15,14, 13,12	Multiplexer inputs
Y	5	Multiplexer output
Y	6	Complementary multiplexer output
OE	7	3-state output enable input (active LOW)
GND	8	Ground
S ₀ , S ₁ , S ₂	11, 10, 9	select inputs
V _{CC}	16	Positive supply voltage

[illegible]

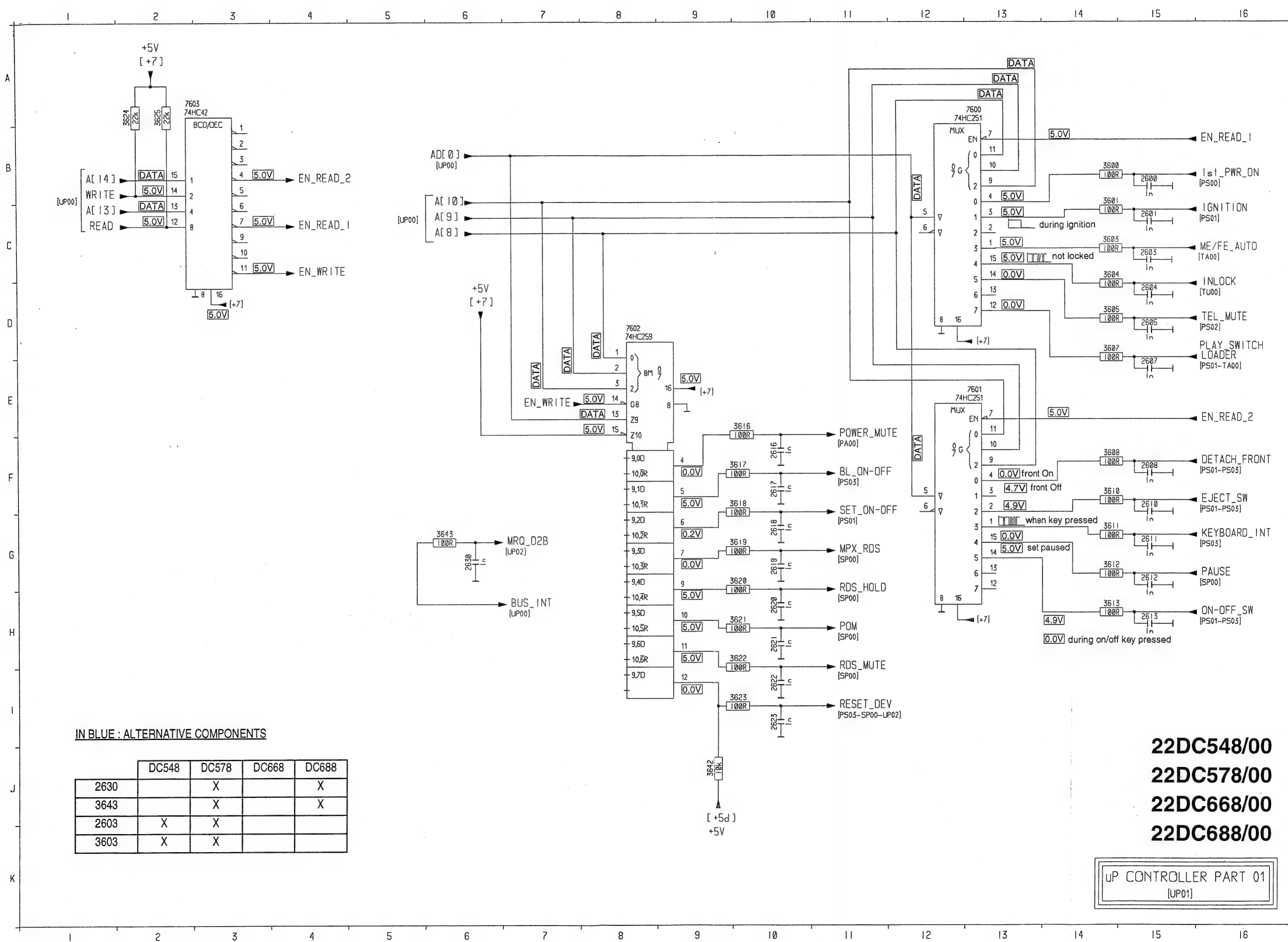
SYMBOL	PIN	DESCRIPTION
A ₀ to A ₂	1,2,3	Address inputs
Q ₀ to Q ₇	4, 5, 6, 7, 9, 10, 11, 12	Latch outputs
GND	8	Ground
D	13	Data input
LE	14	latch enable input (active LOW)
MR	15	conditional reset input(active LOW)
V _{CC}	16	Positive supply voltage



H=HIGH voltage level.
L= LOW voltage level.
x= don't care.
d= HIGH or LOW data one set-up time prior to the LOW-to-HIGH LE transition.
q= lower case letters indicate the state of the referenced output established during the last cycle in which it was addressed or cleared.

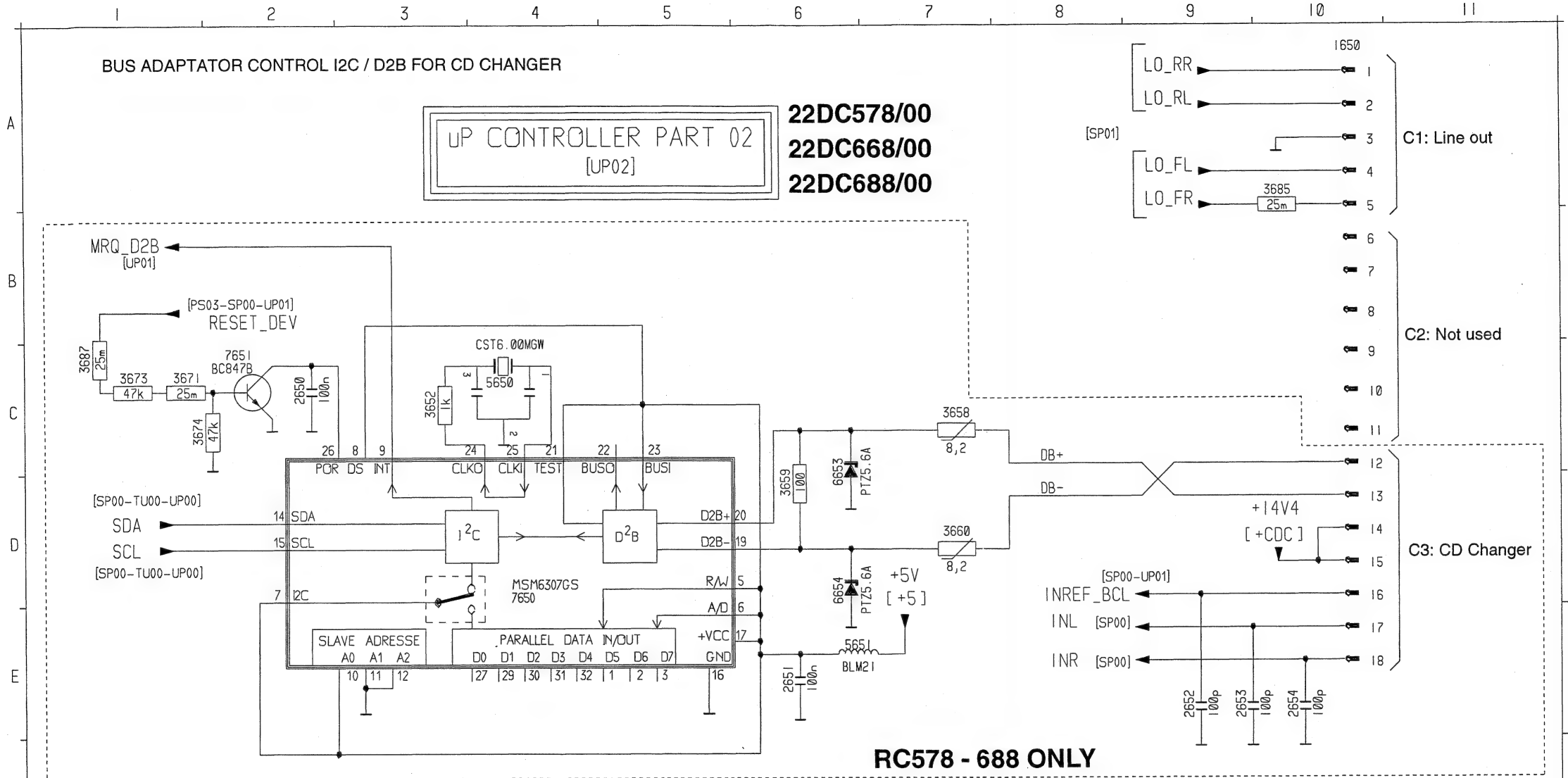
OPERATING MODES		INPUTS						OUTPUTS								
	MR	LE	D	A0	A1	A2	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7		
master reset	L	H	X	X	X	X	L	L	L	L	L	L	L	L		
demultiplex (active HIGH) decoder (when D=H)	L	L	d	L	L	L	Q=d	L	L	L	L	L	L	L		
	L	L	d	H	L	L	L	Q=d	L	L	L	L	L	L		
	L	L	d	L	H	L	L	L	Q=d	L	L	L	L	L		
	L	L	d	H	H	L	L	L	L	Q=d	L	L	L	L		
	L	L	d	L	L	H	L	L	L	L	Q=d	L	L	L		
	L	L	d	H	L	H	L	L	L	L	L	Q=d	L	L		
	L	L	d	H	H	H	L	L	L	L	L	L	Q=d	L		
store (do nothing)	H	H	X	X	X	X	q ₀	q ₁	q ₂	q ₃	q ₄	q ₅	q ₆	q ₇		
addressable latch	H	L	d	L	L	L	Q=d	q ₁	q ₂	q ₃	q ₄	q ₅	q ₆	q ₇		
	H	L	d	H	L	L	q ₀	Q=d	q ₂	q ₃	q ₄	q ₅	q ₆	q ₇		
	H	L	d	L	H	L	q ₀	q ₁	Q=d	q ₃	q ₄	q ₅	q ₆	q ₇		
	H	L	d	H	H	L	q ₀	q ₁	q ₂	Q=d	q ₄	q ₅	q ₆	q ₇		
	H	L	d	L	L	H	q ₀	q ₁	q ₂	q ₃	Q=d	q ₅	q ₆	q ₇		
	H	L	d	H	L	H	q ₀	q ₁	q ₂	q ₃	q ₄	Q=d	q ₆	q ₇		
	H	L	d	L	H	H	q ₀	q ₁	q ₂	q ₃	q ₄	q ₅	Q=d	q ₇		

AD[0]B6	BL_ON-OFFF11	EN_WRITEC4/E7	MPX_RDSG11	POWER_MUTEE11	TEL_MUTED15
A[10]C6	BUS_INTH7	IGNITIONC15	MRQ_D2BG7	RDS_HOLDG11	WRITEB2
A[13]C2	DETACH_FRONTF15	INLOCKD15	ON-OFF_SWH15	RDS_MUTEH11	1st_PWR_ONB15
A[14]B2	EJECT_SWF15	KEYBOARD_INTG15	PAUSEG15	READC2	
A[8]C6	EN_READ_1C4/B15	LOADERD15	PLAY_SWITCHD15	RESET_DEVI11	
A[9]C6	EN_READ_2B4/E14	ME/FE_AUTOC15	POMH11	SET_ON-OFFF11	



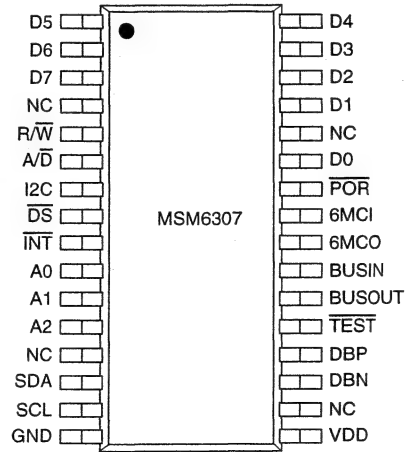
2600 B15
2601 C15
2603 C15
2604 D15
2605 D15
2607 E15
2608 F15
2610 F15
2611 G15
2612 G15
2613 H15
2616 F10
2617 F10
2618 G10
2619 G10
2620 H10
2621 H10
2622 I10
2623 I10
2630 G 6
3600 B14
3601 C14
3603 C14
3604 C14
3605 D14
3607 D14
3608 F14
3610 F14
3611 G14
3612 G14
3613 H14
3616 E10
3617 F10
3618 F10
3619 G10
3620 G10
3621 H10
3622 H10
3623 I10
3624 A 2
3625 A 2
3642 J 9
3643 G 6
7600 A13
7601 E13
7602 D 8
7603 A 2

INL.....E9 LO_RR.....A9
 INR.....E9 MRQ_D2B.....B1
 INREF_BCL.....D9 RESET_DEV.....B1
 LO_FL.....A9 SCL.....D1
 LO_FR.....A9 SDA.....D1
 LO_RL.....A9

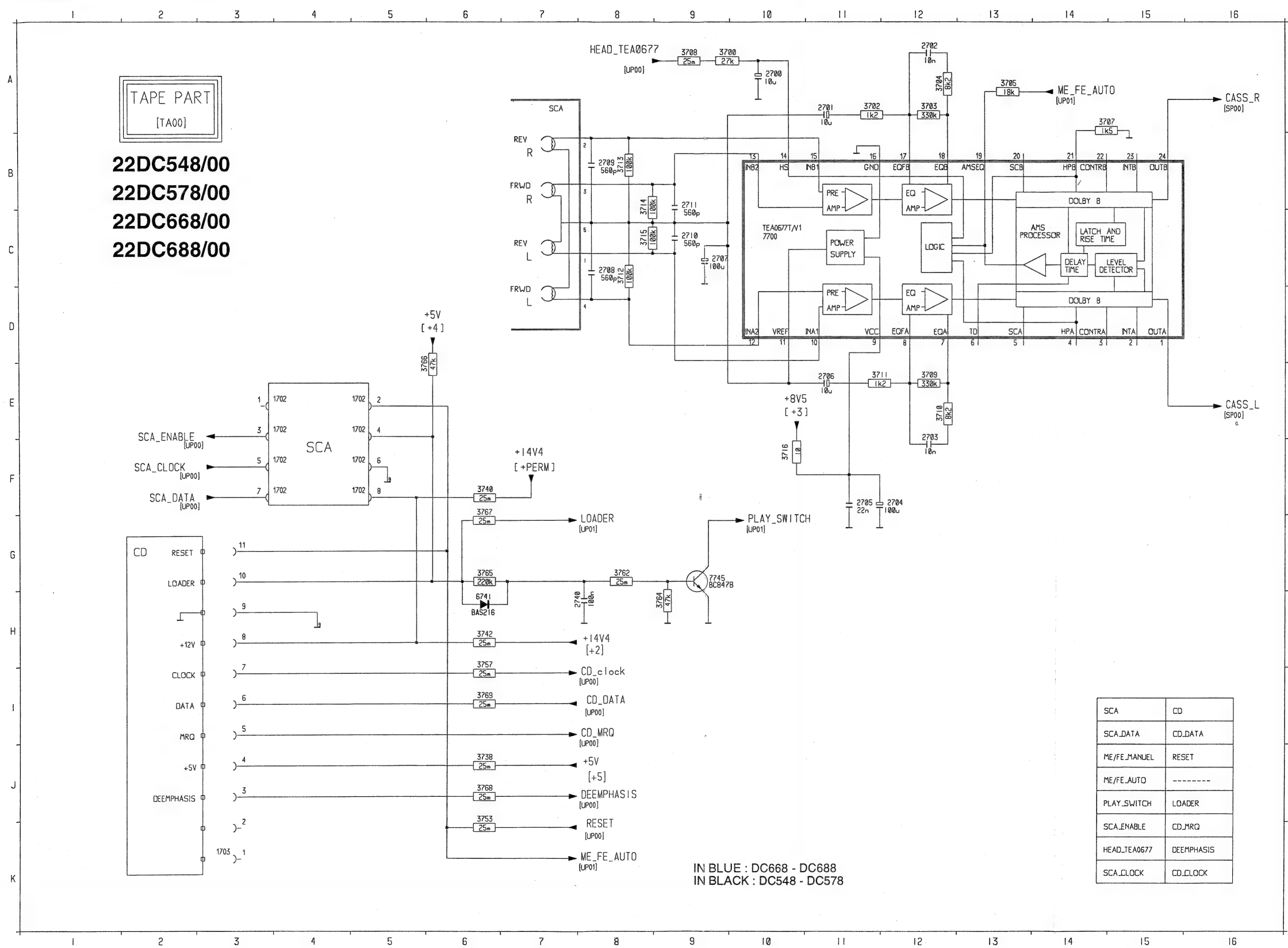


1650 A10
 2650 C 2
 2651 E 6
 2652 E 9
 2653 E 9
 2654 E10
 3652 C 3
 3658 C 7
 3659 D 6
 3660 D 7
 3671 C 1
 3673 C 1
 3674 C 1
 3685 A10
 3687 C 1
 5650 C 3
 5651 E 6
 6653 C 6
 6654 D 6
 7650 D 3
 7651 C 1

MSM6307GS D ² B IC		
SYMBOL	I/O	DESCRIPTION
POR	I	Power on - reset
R / W	I	Read / Write selector
DS	I	Data strobe to access data bus
A / D	I	Selects address or data on D0 ~ d7
SDA	I/O	I ² C data signal input / output
SCL	I/O	I ² C clock signal input / output
I2C	I	Selects I ² C or parallel interface
INT	O	Interrupt output
BUSIN	I	D2B input (TTL level)
BUSOUT	O	D2B output (TTL level)
DBN & DBP	I/Os	Differential D2B lines of the internal driver/receiver, to be terminated with 60Ω
TEST	I	Selects the test mode for factory purposes
6MCI	I	Clock input 6MHz resonator or X-TAL
6MCO	O	Clock output 6MHz resonator or X-TAL
D0 ~ D7	I/Os	8-bit bi-directional address or data bus
A0 ~ A2	I	Programmable I ² C slave addresses



CASS_L E16
 CASS_R A16
 CD_CLOCK I7
 CD_DATA I7
 CD_MRQ I7
 DEEMPHASIS J7
 HEAD_TEA0677 A8
 LOADER G7
 ME_FE_AUTO A14/K7
 PLAY_SWITCH G10
 RESET K7
 SCA_CLOCK F3
 SCA_DATA F3
 SCA_ENABLE E3

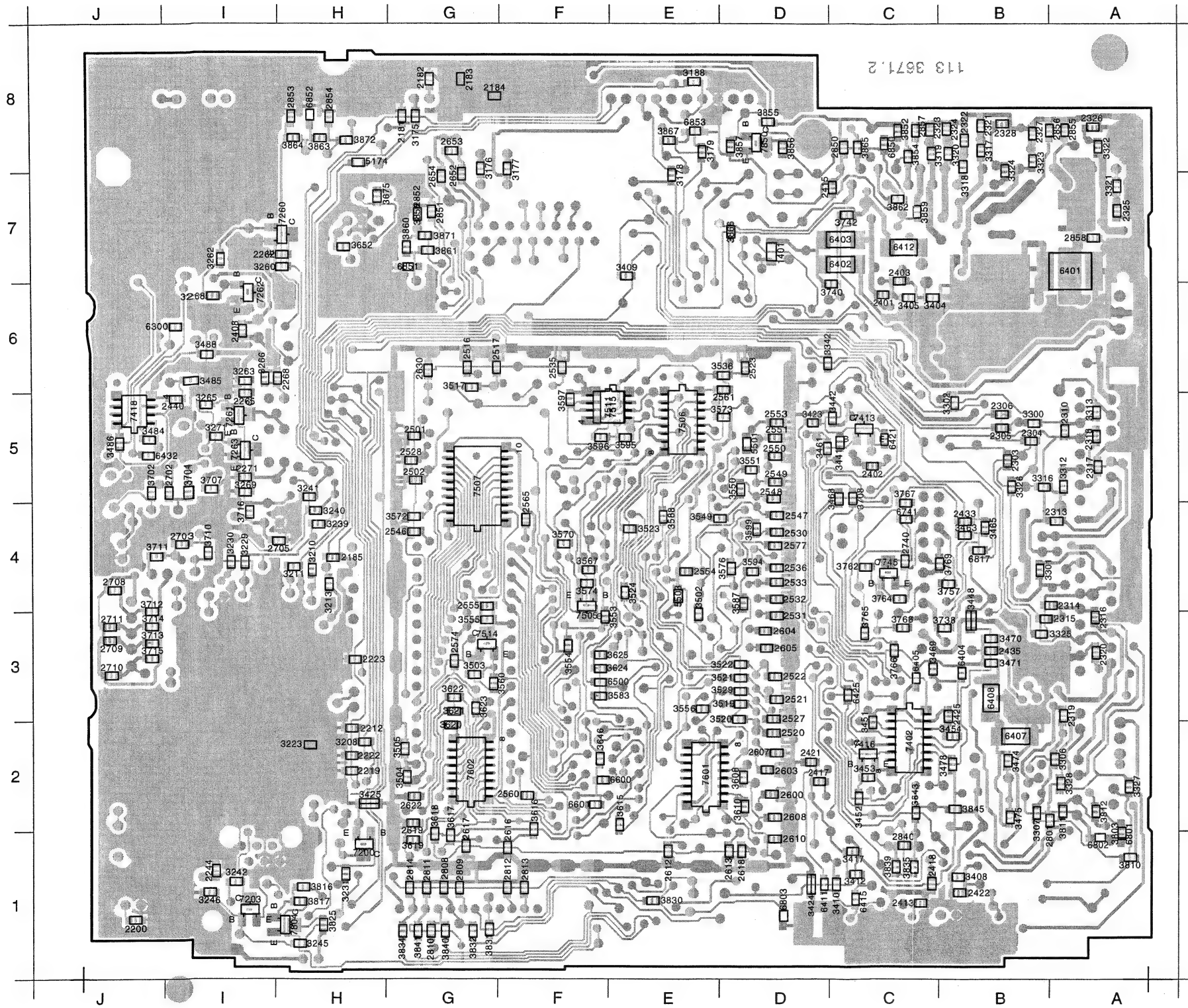


1702 F 5
 1703 K 3
 2700 A10
 2701 A11
 2702 A12
 2703 F12
 2704 F12
 2705 F11
 2706 E11
 2707 C 9
 2708 C 8
 2709 B 8
 2710 C 9
 2711 B 9
 2740 H 8
 3700 A 9
 3702 A11
 3703 A12
 3704 A12
 3705 A13
 3707 A14
 3708 A 9
 3709 E12
 3710 E12
 3711 E11
 3712 C 8
 3713 B 8
 3714 B 8
 3715 C 8
 3716 F10
 3738 J 6
 3740 F 6
 3742 H 6
 3753 J 6
 3757 H 6
 3762 G 8
 3764 H 9
 3765 G 6
 3766 E 5
 3767 F 6
 3768 J 6
 3769 I 6
 6741 H 6
 7700 C10
 7745 G 9

SCA	CD
SCA_DATA	CD_DATA
ME/FE_MANUEL	RESET
ME/FE_AUTO	-----
PLAY_SWITCH	LOADER
SCA_ENABLE	CD_MRQ
HEAD_TEA0677	DEEMPHASIS
SCA_CLOCK	CD_CLOCK

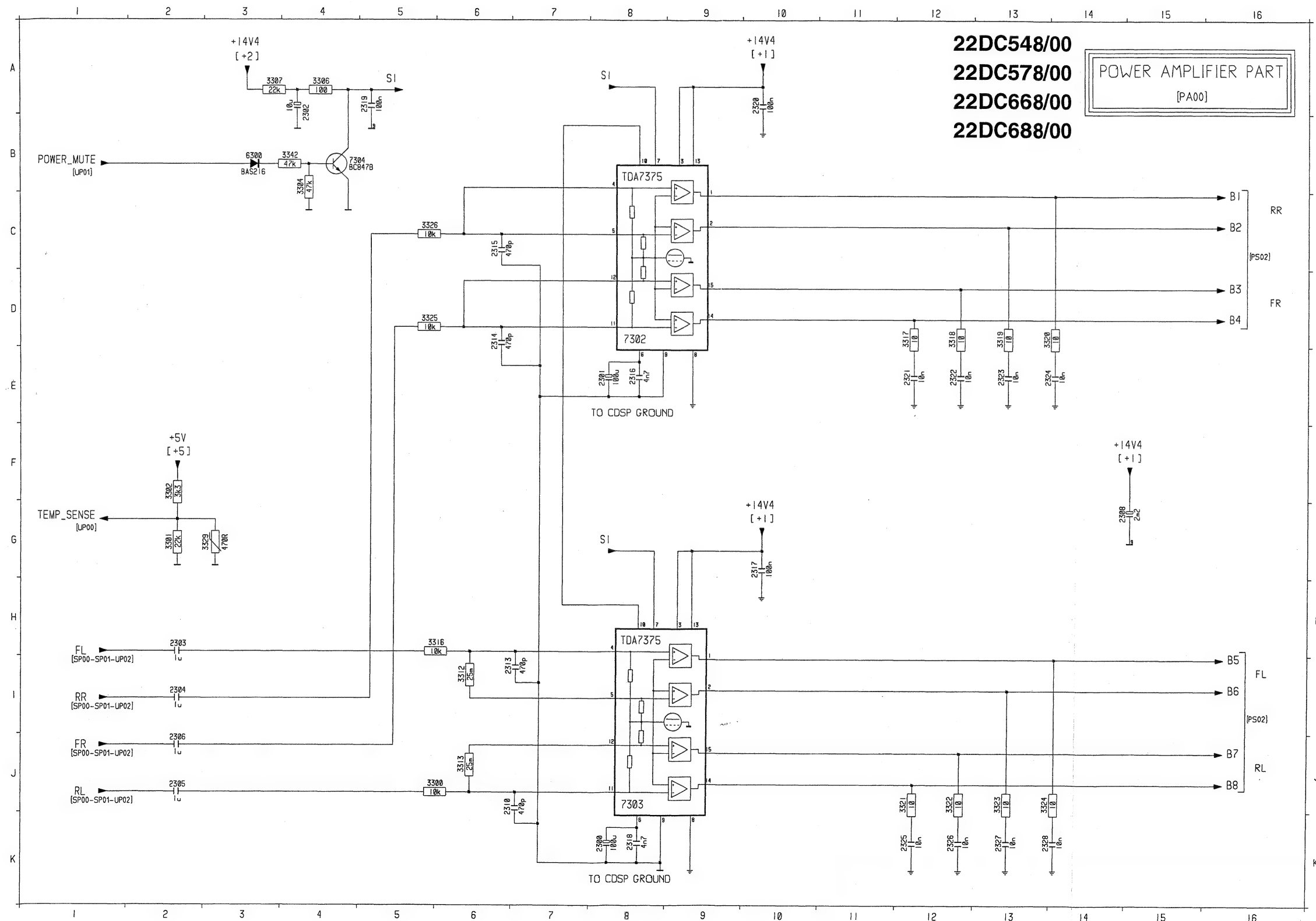
IN BLUE : DC668 - DC688
 IN BLACK : DC548 - DC578

MAIN PWB LAYOUT. BOTTOM SIDE VIEW



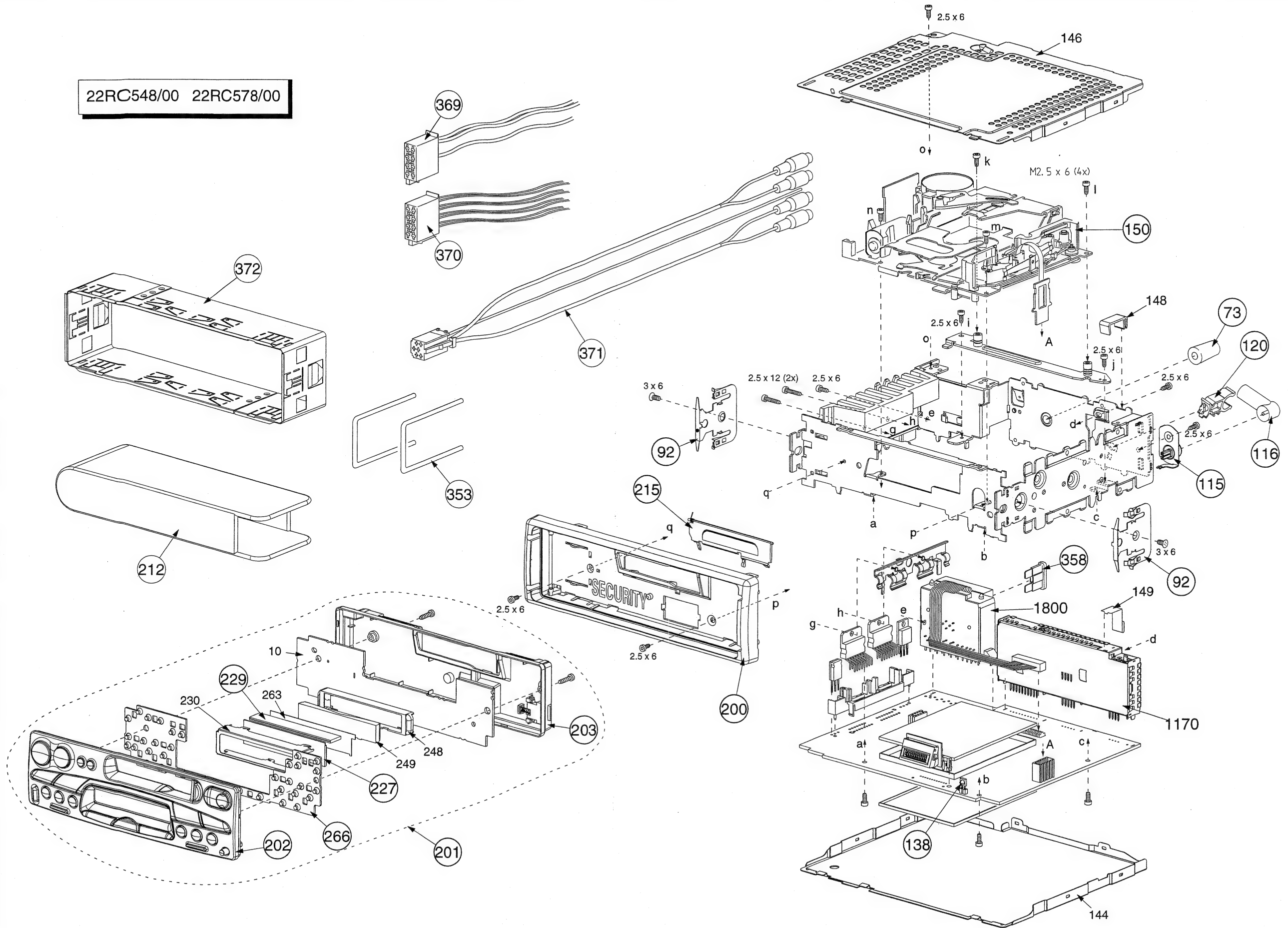
1401 D 7	2561 E 6	3301 B 4	3576 E 4	3866 E 7
2181 H 8	2565 F 5	3302 C 6	3583 F 3	3867 E 8
2182 G 8	2574 G 3	3306 B 2	3587 E 4	3871 G 7
2183 G 8	2577 D 4	3307 B 2	3588 E 5	3872 H 8
2184 G 8	2600 D 2	3312 B 5	3594 D 4	5174 H 8
2185 H 4	2603 D 2	3313 A 6	3595 F 5	5501 D 5
2200 J 1	2604 D 4	3316 B 5	3596 F 5	5503 E 4
2212 H 3	2605 D 3	3317 B 8	3597 F 6	6300 J 6
2219 H 2	2607 D 2	3318 C 8	3599 D 4	6401 B 7
2222 H 2	2608 D 2	3319 C 8	3608 E 2	6402 D 7
2223 H 3	2610 D 2	3320 C 8	3610 D 2	6403 D 7
2244 I 1	2612 E 2	3321 A 8	3615 F 2	6404 C 3
2262 I 7	2613 E 2	3322 A 8	3616 F 2	6405 C 3
2265 I 6	2616 G 2	3323 B 8	3617 G 2	6407 B 3
2268 I 6	2617 G 2	3324 B 8	3618 G 2	6408 B 3
2271 I 5	2618 E 2	3325 B 4	3619 G 2	6411 D 1
2303 B 5	2619 G 2	3326 B 5	3620 G 3	6412 C 7
2304 B 5	2622 G 2	3327 A 2	3621 G 3	6415 C 1
2305 B 5	2630 G 6	3328 B 2	3622 G 3	6421 C 5
2306 B 6	2652 G 8	3342 D 6	3623 G 3	6425 D 3
2310 B 5	2653 G 8	3404 C 7	3624 F 3	6432 J 5
2313 B 5	2654 G 8	3405 C 7	3625 F 3	6500 F 7
2314 B 4	2702 J 5	3408 C 1	3646 F 2	6600 F 2
2315 B 4	2703 J 4	3409 F 7	3652 H 7	6601 F 2
2316 A 4	2705 I 4	3410 D 1	3675 H 7	6741 C 5
2317 A 5	2708 J 4	3412 C 1	3702 J 5	6801 A 2
2318 A 5	2709 J 3	3417 D 2	3704 J 5	6802 A 2
2319 B 3	2710 J 3	3423 D 5	3707 I 5	6803 D 1
2320 A 3	2711 J 4	3424 D 1	3708 D 5	6817 B 4
2321 B 8	2740 C 4	3425 H 2	3710 I 4	6850 C 4
2322 B 8	2801 B 2	3441 D 5	3711 J 4	6851 H 7
2323 C 8	2808 G 1	3442 D 5	3712 J 4	6852 H 8
2324 C 8	2809 G 1	3448 B 4	3713 J 3	6853 E 8
2325 A 7	2810 G 1	3451 C 3	3714 J 4	7200 H 2
2326 A 8	2811 G 1	3452 C 2	3715 J 3	7203 I 1
2327 B 8	2812 G 1	3453 C 2	3716 I 5	7260 I 7
2328 B 8	2813 F 1	3454 C 3	3738 C 4	7261 I 6
2401 C 7	2814 H 1	3461 D 5	3740 D 7	7262 I 7
2402 C 5	2840 C 2	3463 B 4	3742 D 7	7263 I 5
2403 C 7	2850 D 8	3465 B 4	3757 C 4	7402 C 3
2408 I 6	2851 G 7	3468 D 5	3762 C 4	7413 C 5
2413 C 1	2852 G 7	3469 C 3	3764 C 4	7416 C 2
2415 D 8	2853 I 8	3470 B 3	3765 C 4	7418 J 6
2417 D 2	2854 H 8	3471 B 3	3766 C 3	7505 F 4
2418 C 1	2855 B 8	3474 B 2	3767 C 5	7506 E 5
2421 D 2	2856 B 8	3475 B 2	3768 C 4	7507 G 5
2422 C 1	2857 C 8	3478 C 2	3769 C 4	7511 F 6
2425 C 3	2858 A 7	3484 J 5	3803 A 2	7514 G 3
2433 B 5	3175 G 8	3485 I 6	3810 A 1	7515 F 6
2435 B 3	3176 G 8	3486 J 5	3811 B 2	7601 E 2
2440 J 6	3177 G 8	3488 I 6	3812 A 2	7602 G 2
2501 G 5	3178 E 8	3502 E 4	3816 H 1	7745 C 4
2502 G 5	3179 E 8	3503 G 3	3817 H 1	7804 I 1
2516 G 6	3188 E 8	3504 H 2	3825 H 1	7850 D 8
2517 G 6	3208 H 3	3505 H 2	3830 E 1	
2520 D 3	3210 H 4	3517 G 6	3831 G 1	
2521 D 3	3211 I 4	3519 E 3	3832 G 1	
2522 D 3	3213 H 4	3520 E 3	3834 H 1	
2523 D 6	3223 H 2	3521 E 3	3835 C 1	
2527 D 3	3229 I 4	3522 E 3	3839 C 1	
2528 H 5	3230 I 4	3523 F 4	3840 G 1	
2530 D 4	3231 H 1	3524 F 4	3841 G 1	
2531 D 4	3239 H 5	3529 E 3	3843 C 2	
2532 D 4	3240 H 5	3536 E 6	3845 C 2	
2533 D 4	3241 H 5	3549 E 5	3852 C 8	
2535 F 6	3242 I 1	3550 E 5	3854 C 8	
2536 D 4	3245 H 1	3551 D 5	3855 D 8	
2546 G 4	3246 I 1	3553 F 4	3856 D 8	
2547 D 5	3260 I 7	3554 F 3	3857 E 8	
2548 D 5	3262 I 7	3555 G 4	3858 G 7	
2549 D 5	3263 I 6	3556 E 3	3859 C 7	
2550 D 5	3265 I 6	3560 G 3	3860 H 7	
2551 D 5	3266 I 6	3567 F 4	3861 G 7	
2553 D 5	3268 I 7	3570 F 4	3862 C 7	
2554 E 4	3269 I 5	3572 G 5	3863 H 8	
2555 G 4	3271 I 5	3573 E 5	3864 I 8	
2560 F 2	3300 B 5	3574 F 4	3865 C 8	

B1C16	B7J16	RRI1
B2C16	B8J16	SIA5-A8-G8
B3D16	FLH1	TEMP_SENSEG1
B4D16	FRJ1	
B5I16	POWER_MUTEB1	
B6I16	RLJ1	



2300	K 8
2301	E 8
2302	A 4
2303	H 2
2304	I 2
2305	J 2
2306	J 2
2308	G14
2310	J 6
2313	I 6
2314	D 6
2315	C 6
2316	E 8
2317	G10
2318	K 8
2319	A 5
2320	A10
2321	E 9
2322	E10
2323	E10
2324	E11
2325	K16
2326	K15
2327	K15
2328	K14
3300	J 6
3301	G 2
3302	F 2
3304	B 4
3306	A 4
3307	A 3
3312	I 6
3313	J 6
3316	H 6
3317	D 9
3318	D10
3319	D10
3320	D11
3321	J16
3322	J15
3323	J15
3324	J14
3325	D 5
3326	C 5
3329	G 3
3342	B 4
6300	B 3
7302	D 8
7303	J 8
7304	B 4

22RC548/00 22RC578/00



Mechanical partslist

Pos	Designation	Service code	548	578	668	688
73	Plastic holder	4822 532 11092	X	X	X	X
92	Fixing spring	4822 492 71046	X	X	X	X
115	Aerial bush assy	4822 265 10717	X	X	X	X
116	Aerial adaptor	4822 263 21164	X	X	X	X
120	Aerial adaptor holder	4822 256 10293	X	X	X	X
138	Blinking LED	4822 130 82996	X	X	X	X
170*	CDM9 car Loader	4822 691 10366			X	X
200	Fixed plate assy	4822 454 13145	X	X		
200	Fixed plate assy	4822 459 04316			X	X
201	Complete detachable front	4822 459 04334	X			
201	Complete detachable front	4822 459 04332		X		
201	Complete detachable front	4822 459 04331			X	
201	Complete detachable front	4822 459 04317				X
202	Cover front assy	4822 459 04335	X			
202	Cover front assy	4822 459 04333		X		
202	Cover front assy	4822 459 04329			X	
202	Cover front assy	4822 459 04318				X
203	Cover back assy	4822 442 00554	X	X		
203	Cover back assy	4822 426 10272			X	X
212	Box for detachable unit	4822 418 10123	X	X	X	X
215	Flap cassette printed	4822 443 10435	X			
215	Flap cassette printed	4822 443 10434		X		
227	LCD	4822 135 00013	X	X	X	X
229	Zebra connector	4822 267 10334	X	X	X	X
266	Switch mat	4822 410 10713	X	X		
266	Switch mat	4822 276 13791			X	X
353	Demounting brackets	4822 404 20437	X	X	X	X
355	Cable head CD3A	4822 320 11639			X	X
358	Fuse blade	4822 071 21003	X	X	X	X
369	Power supply cable	4822 321 11012	X	X	X	X
370	Loudspeakers cable	4822 320 11637	X	X	X	X
371	Line out cable	4822 320 11638		X	X	X
372	Sleeve	4822 443 30463	X	X	X	X
1800	Connector block	4822 265 10736	X			
1800	Connector block	4822 265 10716		X	X	X

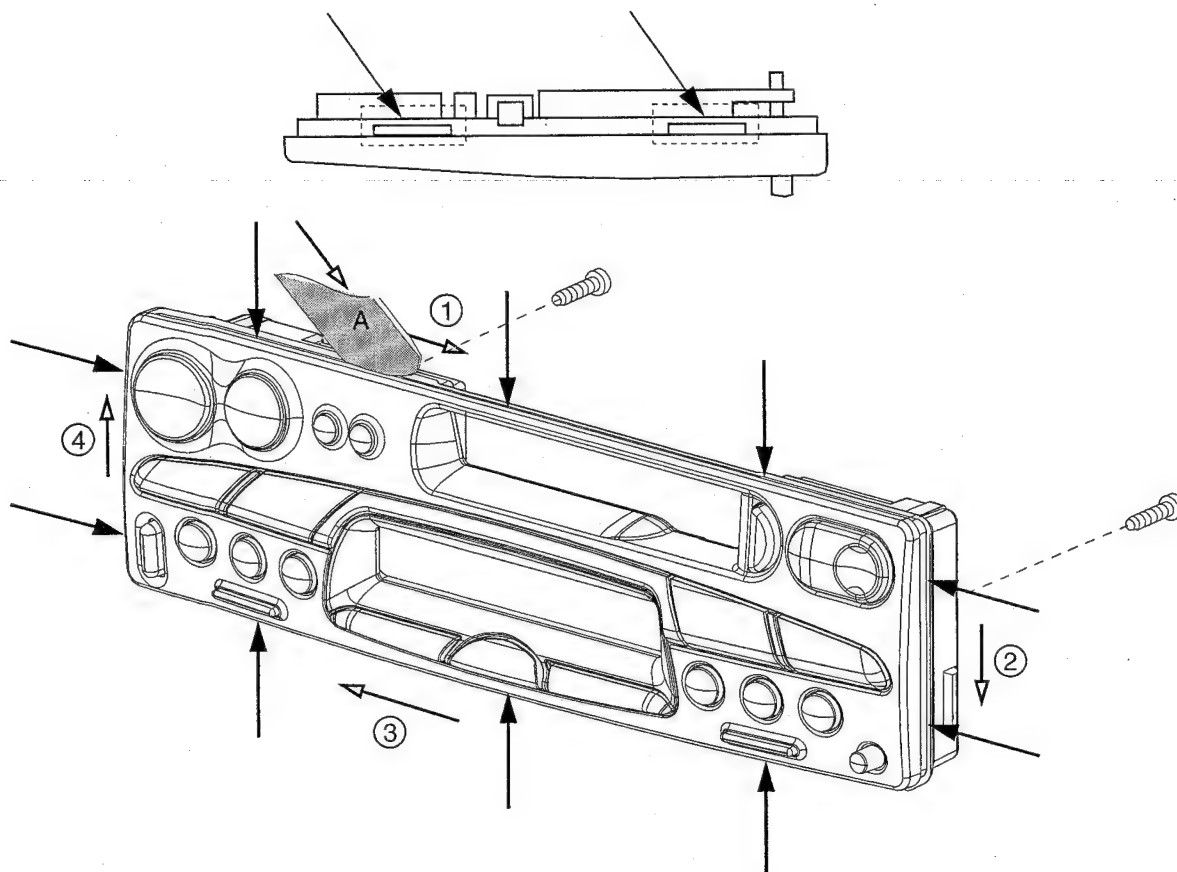
* Item 170 is only the car loader (mechanical) part of the CD player.

For repair information about this car loader, please refer to Service manual 4822 725 23506
CD-mechanism CDM-9 MOD4, item 1002.

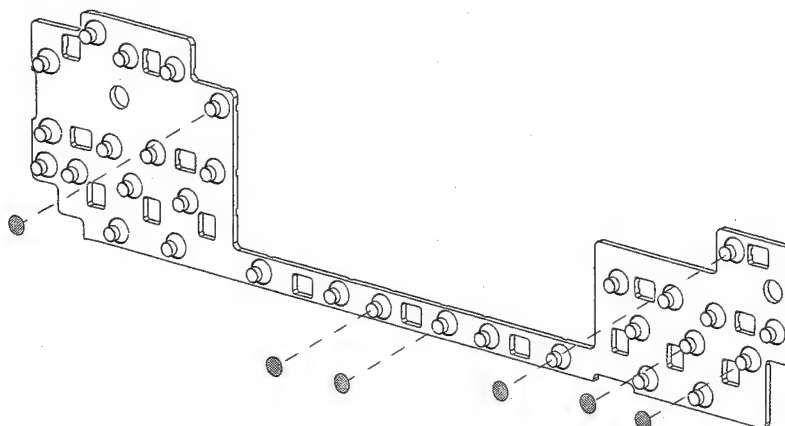
Opening the front:

Both parts (front and rear) are assembled by 2 screws and 10 locking clamps (arrows). To unassemble these parts, first remove the screws and then use part A on the 4 sides as indicated on the drawing. Part A must be a thin plastic part. This procedure is applicable also for CD front.

If you brake any part of the locking on the cover front, you must change the cover front. If not, it may cause further defaults like "button does not operate"...

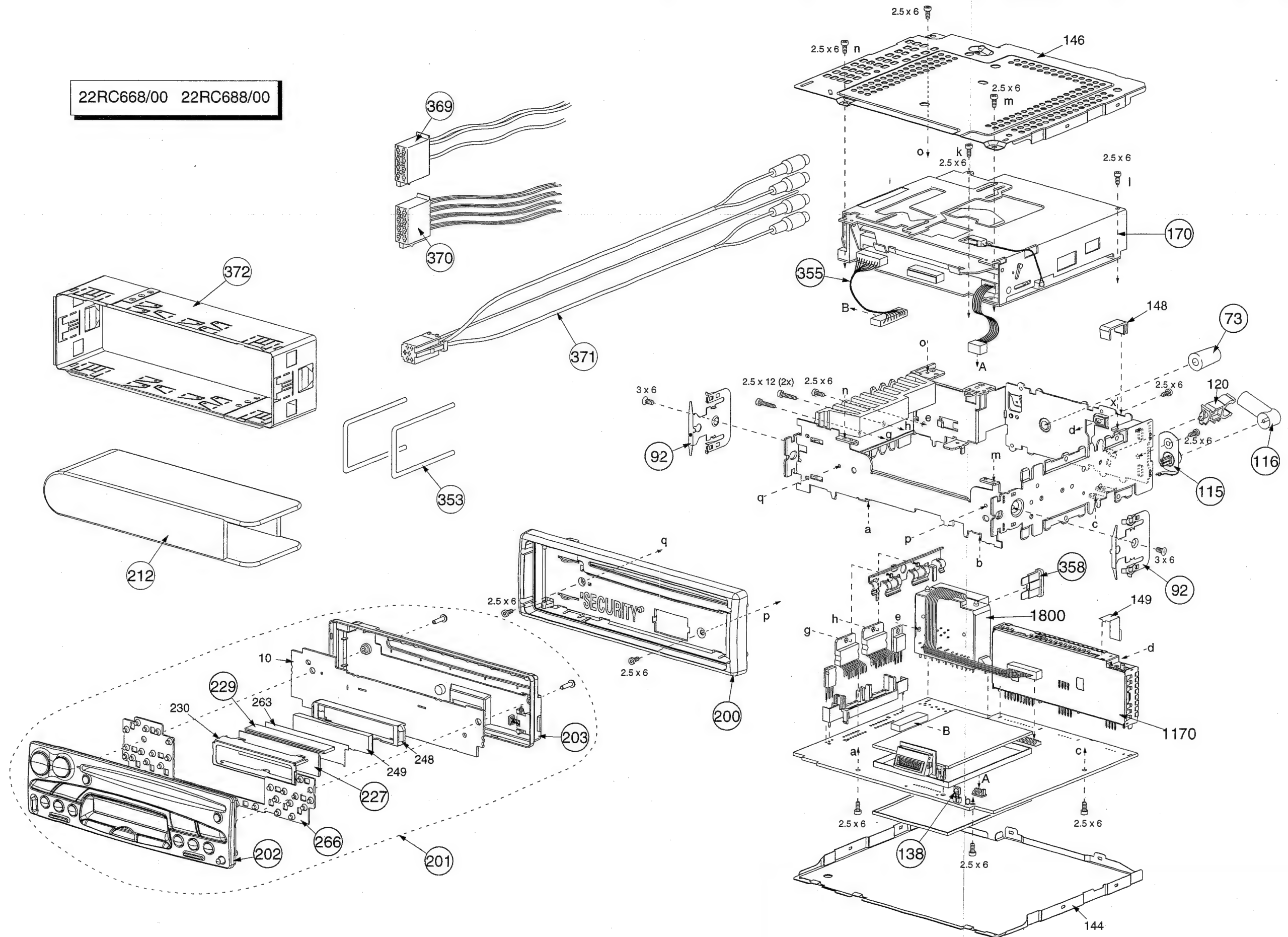


Position of the plastic spacers (22RC668/688 only):





22RC548/00
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22RC668/00
22RC688/00



22RC668/00 22RC688/00








Miscellaneous				-II-		
1000	4822 691 10366			2253	4822 126 13849	220nF 10% 16V
1170	4822 210 10721	TUNER		2254	4822 126 13196	100nF 10% X7R 25V
1401	4822 252 51164	1.5A 32V (T)		2255	4822 124 23279	22μF 20% 16V
1500	4822 242 10564	CSTCS16.00MX040-TC		2256	4822 124 22646	47μF 20% 16V
1800	4822 265 10716	CONNECTOR BLOCK		2257	4822 126 14043	1μF +80-20% 16V
1801	4822 256 30483	LAMP HOLDER				
-II-				2258	4822 126 14043	1μF +80-20% 16V
2182	5322 122 32654	22nF 10% X7R 63V		2261	4822 124 41017	10μF 16V
2183	5322 122 32654	22nF 10% X7R 63V		2262	5322 122 34123	1nF 10% X7R 50V
2200	4822 126 13196	100nF 10% X7R 25V		2264	4822 124 41017	10μF 16V
2202	5322 122 34123	1nF 10% X7R 50V		2265	5322 122 34123	1nF 10% X7R 50V
2204	4822 126 13849	220nF 10% 16V				
2205	4822 126 13849	220nF 10% 16V		2267	4822 124 41017	10μF 16V
2206	5322 126 10223	4,7nF 10% X7R 63V		2268	5322 122 34123	1nF 10% X7R 50V
2207	5322 126 10223	4,7nF 10% X7R 63V		2270	4822 124 41017	10μF 16V
2208	5322 122 32531	100pF 5% NP0 50V		2271	5322 122 34123	1nF 10% X7R 50V
2209	4822 122 33342	33nF 10% X7R 63V		2300	4822 124 80453	100μF 20% 10V
2210	4822 126 13849	220nF 10% 16V		2301	4822 124 80453	100μF 20% 10V
2211	4822 126 13196	100nF 10% X7R 25V		2302	4822 124 41017	10μF 16V
2212	5322 122 34098	10nF 10% X7R 63V		2303	4822 126 14043	1μF +80-20% 16V
2213	5322 122 34098	10nF 10% X7R 63V		2304	4822 126 14043	1μF +80-20% 16V
2214	5322 122 31863	330pF 5% NP0 50V		2305	4822 126 14043	1μF +80-20% 16V
2215	5322 122 33538	150pF 2% NP0 63V		2306	4822 126 14043	1μF +80-20% 16V
2216	5322 122 31863	330pF 5% NP0 50V		2308	4822 124 80769	2200μF 20% 16V
2217	5322 122 34123	1nF 10% X7R 50V		2310	5322 122 32268	470pF 10% 50V
2218	5322 122 34123	1nF 10% X7R 50V		2313	5322 122 32268	470pF 10% 50V
2219	5322 122 34098	10nF 10% X7R 63V		2314	5322 122 32268	470pF 10% 50V
2220	5322 122 34123	1nF 10% X7R 50V		2315	5322 122 32268	470pF 10% 50V
2221	5322 122 34123	1nF 10% X7R 50V		2316	5322 126 10223	4,7nF 10% X7R 63V
2222	5322 122 34098	10nF 10% X7R 63V		2317	4822 126 13196	100nF 10% X7R 25V
2223	5322 122 34098	10nF 10% X7R 63V		2318	5322 126 10223	4,7nF 10% X7R 63V
2224	5322 122 34123	1nF 10% X7R 50V		2319	4822 126 13196	100nF 10% X7R 25V
2225	4822 126 13196	100nF 10% X7R 25V		2320	4822 126 13196	100nF 10% X7R 25V
2226	5322 122 34123	1nF 10% X7R 50V		2321	5322 122 34098	10nF 10% X7R 63V
2228	4822 126 13196	100nF 10% X7R 25V		2322	5322 122 34098	10nF 10% X7R 63V
2229	5322 122 32531	100pF 5% NP0 50V		2323	5322 122 34098	10nF 10% X7R 63V
2230	5322 122 32531	100pF 5% NP0 50V		2324	5322 122 34098	10nF 10% X7R 63V
2231	4822 126 13196	100nF 10% X7R 25V		2325	5322 122 34098	10nF 10% X7R 63V
2232	4822 126 13196	100nF 10% X7R 25V		2326	5322 122 34098	10nF 10% X7R 63V
2233	5322 122 31863	330pF 5% NP0 50V		2327	5322 122 34098	10nF 10% X7R 63V
2234	5322 122 31863	330pF 5% NP0 50V		2328	5322 122 34098	10nF 10% X7R 63V
2235	5322 122 34123	1nF 10% X7R 50V		2401	5322 126 10223	4,7nF 10% X7R 63V
2236	5322 122 34123	1nF 10% X7R 50V		2402	4822 122 33342	33nF 10% X7R 63V
2237	4822 124 23279	22μF 20% 16V		2404	4822 124 41017	10μF 16V
2238	4822 124 23582	220μF 10V		2405	4822 124 80769	2200μF 20% 16V
2239	4822 124 80453	100μF 20% 10V		2407	5322 122 32268	470pF 10% 50V
2240	4822 124 23279	22μF 20% 16V		2408	4822 126 13849	220nF 10% 16V
2241	4822 126 14043	1μF +80-20% 16V		2409	4822 126 13849	220nF 10% 16V
2242	4822 124 23279	22μF 20% 16V		2410	4822 124 80766	1000μF 20% 25V
2243	4822 124 23282	1μF 20% 50V		2411	4822 124 80453	100μF 20% 10V
2244	5322 122 34123	1nF 10% X7R 50V		2412	4822 124 23281	33μF 20% 16V
2245	5322 122 32448	10pF 5% 50V		2413	5322 122 32654	22nF 10% X7R 63V
2246	5322 122 32448	10pF 5% 50V		2414	4822 124 23282	1μF 20% 50V
2247	5322 122 34123	1nF 10% X7R 50V		2415	4822 122 33575	220pF 5%NPO 50V
2248	4822 122 33575	220pF 5%NPO 50V		2416	4822 124 23281	33μF 20% 16V
2249	4822 122 33575	220pF 5%NPO 50V		2417	4822 126 14043	1μF +80-20% 16V
2250	5322 122 32531	100pF 5% NP0 50V		2418	4822 126 13849	220nF 10% 16V
2251	5322 122 32531	100pF 5% NP0 50V		2419	5322 126 10223	4,7nF 10% X7R 63V
2252	4822 126 13849	220nF 10% 16V		2420	4822 126 13196	100nF 10% X7R 25V
				2421	4822 126 14043	1μF +80-20% 16V
				2425	4822 122 33342	33nF 10% X7R 63V
				2428	5322 122 34098	10nF 10% X7R 63V

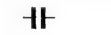


-II-			-II-		
2429	5322 122 34098	10nF 10% X7R 63V	2651	4822 126 13196	100nF 10% X7R 25V
2432	5322 122 34098	10nF 10% X7R 63V	2652	5322 122 32531	100pF 5% NP0 50V
2433	5322 122 34098	10nF 10% X7R 63V	2653	5322 122 32531	100pF 5% NP0 50V
2440	5322 122 32654	22nF 10% X7R 63V	2654	5322 122 32531	100pF 5% NP0 50V
2501	5322 122 34123	1nF 10% X7R 50V	2700	4822 124 41017	10μF 16V
2516	5322 122 33869	15pF 5% NP0 63V	2701	4822 124 41017	10μF 16V
2517	5322 122 33869	15pF 5% NP0 63V	2702	5322 122 34098	10nF 10% X7R 63V
2518	5322 122 32531	100pF 5% NP0 50V	2703	5322 122 34098	10nF 10% X7R 63V
2520	5322 122 34123	1nF 10% X7R 50V	2704	4822 124 80453	100μF 20% 10V
2521	5322 122 34123	1nF 10% X7R 50V	2705	5322 122 32654	22nF 10% X7R 63V
2522	5322 122 34123	1nF 10% X7R 50V	2706	4822 124 41017	10μF 16V
2523	5322 122 33869	15pF 5% NP0 63V	2707	4822 124 80453	100μF 20% 10V
2524	5322 122 33869	15pF 5% NP0 63V	2708	5322 116 80853	560pF 5% 50V
2525	5322 122 34123	1nF 10% X7R 50V	2709	5322 116 80853	560pF 5% 50V
2527	5322 122 34123	1nF 10% X7R 50V	2710	5322 116 80853	560pF 5% 50V
2529	5322 122 34123	1nF 10% X7R 50V	2711	5322 116 80853	560pF 5% 50V
2530	5322 122 34123	1nF 10% X7R 50V	2740	4822 126 13196	100nF 10% X7R 25V
2531	5322 122 34123	1nF 10% X7R 50V	2801	5322 122 34098	10nF 10% X7R 63V
2532	5322 122 34123	1nF 10% X7R 50V	2802	4822 124 41017	10μF 16V
2533	5322 122 34123	1nF 10% X7R 50V	2808	5322 122 32268	470pF 10% 50V
2535	5322 122 34123	1nF 10% X7R 50V	2809	5322 122 32268	470pF 10% 50V
2536	5322 122 34123	1nF 10% X7R 50V	2810	5322 122 32268	470pF 10% 50V
2541	5322 122 34123	1nF 10% X7R 50V	2811	5322 122 32268	470pF 10% 50V
2543	5322 122 34123	1nF 10% X7R 50V	2812	5322 122 32268	470pF 10% 50V
2544	5322 122 34123	1nF 10% X7R 50V	2813	5322 122 32268	470pF 10% 50V
2546	5322 122 34123	1nF 10% X7R 50V	2814	5322 122 32268	470pF 10% 50V
2549	5322 122 34123	1nF 10% X7R 50V	2835	4822 122 33128	15nF 10% X7R 63V
2550	5322 122 34123	1nF 10% X7R 50V	2836	5322 122 32654	22nF 10% X7R 63V
2551	4822 126 13196	100nF 10% X7R 25V	2837	4822 126 13693	56pF 1% NP0 63V
2552	4822 126 13196	100nF 10% X7R 25V	2838	5322 122 32452	47pF 5% NP0 63V
2554	4822 126 13196	100nF 10% X7R 25V	2850	5322 122 34123	1nF 10% X7R 50V
2555	5322 126 10223	4,7nF 10% X7R 63V	2853	5322 122 34123	1nF 10% X7R 50V
2561	5322 122 34098	10nF 10% X7R 63V	2854	5322 122 34098	10nF 10% X7R 63V
2565	5322 122 34098	10nF 10% X7R 63V	2855	5322 122 32531	100pF 5% NP0 50V
2574	5322 122 34098	10nF 10% X7R 63V	2856	5322 122 32531	100pF 5% NP0 50V
2577	4822 122 33342	33nF 10% X7R 63V	2857	4822 122 33575	220pF 5%NPO 50V
2578	4822 126 13196	100nF 10% X7R 25V	2858	5322 122 32531	100pF 5% NP0 50V
2600	5322 122 34123	1nF 10% X7R 50V	-II-		
2601	5322 122 34123	1nF 10% X7R 50V	3175	4822 051 20102	1KΩ 5% 0,1W
2603	5322 122 34123	1nF 10% X7R 50V	3178	4822 051 20008	0Ω JUMP. (0805)
2604	5322 122 34123	1nF 10% X7R 50V	3179	4822 051 20008	0Ω JUMP. (0805)
2605	5322 122 34123	1nF 10% X7R 50V	3201	4822 051 20273	27KΩ 5% 0,1W
2607	5322 122 34123	1nF 10% X7R 50V	3202	4822 051 20273	27KΩ 5% 0,1W
2608	5322 122 34123	1nF 10% X7R 50V	3203	4822 117 11449	2K2 5% RC11
2610	5322 122 34123	1nF 10% X7R 50V	3204	4822 117 11449	2K2 5% RC11
2611	5322 122 34123	1nF 10% X7R 50V	3205	4822 117 10833	10K 1% 0,1W
2612	5322 122 34123	1nF 10% X7R 50V	3206	4822 051 20221	220Ω 5% 0,1W
2613	5322 122 34123	1nF 10% X7R 50V	3207	4822 051 20101	100Ω 5% 0,1W
2614	5322 122 33869	15pF 5% NP0 63V	3208	4822 051 20101	100Ω 5% 0,1W
2615	5322 122 33869	15pF 5% NP0 63V	3209	4822 051 20104	100KΩ 5% 0,1W
2616	5322 122 34123	1nF 10% X7R 50V	3210	4822 051 20332	3K30 5% 0,1W
2617	5322 122 34123	1nF 10% X7R 50V	3211	4822 051 20332	3K30 5% 0,1W
2618	5322 122 34123	1nF 10% X7R 50V	3212	4822 117 10833	10K 1% 0,1W
2619	5322 122 34123	1nF 10% X7R 50V	3213	4822 051 20562	5K60 5% 0,1W
2620	5322 122 34123	1nF 10% X7R 50V	3214	4822 051 20101	100Ω 5% 0,1W
2621	5322 122 34123	1nF 10% X7R 50V	3215	4822 051 20008	0Ω JUMP. (0805)
2622	5322 122 34123	1nF 10% X7R 50V	3216	4822 051 20272	2K70 5% 0,1W
2623	5322 122 34123	1nF 10% X7R 50V	3217	4822 051 20101	100Ω 5% 0,1W
2630	5322 122 34123	1nF 10% X7R 50V			
2650	4822 126 13196	100nF 10% X7R 25V			

					
3218	4822 051 20272	2K70 5% 0,1W	3417	4822 051 20154	150KΩ 5% 0,1W
3219	4822 051 20272	2K70 5% 0,1W	3421	4822 051 20008	0Ω JUMP. (0805)
3220	4822 051 20101	100Ω 5% 0,1W	3422	4822 051 20104	100KΩ 5% 0,1W
3221	4822 051 20101	100Ω 5% 0,1W	3423	4822 051 20104	100KΩ 5% 0,1W
3222	4822 051 20272	2K70 5% 0,1W	3424	4822 051 10008	0Ω 5% 0,25W
3223	4822 051 20183	18KΩ 5% 0,1W	3425	4822 051 10008	0Ω 5% 0,25W
3224	4822 051 20102	1KΩ 5% 0,1W	3427	4822 051 20008	0Ω 5% 0,25W
3226	4822 051 20221	220Ω 5% 0,1W	3430	4822 051 20109	10Ω 5% 0,1W
3227	4822 051 20221	220Ω 5% 0,1W	3431	4822 051 20473	47KΩ 5% 0,1W
3228	4822 051 20273	27KΩ 5% 0,1W	3432	4822 051 20473	47KΩ 5% 0,1W
3229	4822 051 20472	4K70 5% 0,1W	3433	4822 051 20473	47KΩ 5% 0,1W
3230	4822 051 20472	4K70 5% 0,1W	3441	4822 051 20473	47KΩ 5% 0,1W
3231	4822 117 10833	10K 1% 0,1W	3442	4822 051 20224	220KΩ 5% 0,1W
3232	4822 051 20008	0Ω JUMP. (0805)	3444	4822 051 20105	1M00 5% 0,1W
3233	4822 051 20008	0Ω JUMP. (0805)	3445	4822 051 20105	1M00 5% 0,1W
3234	4822 051 20221	220Ω 5% 0,1W	3447	4822 051 20224	220KΩ 5% 0,1W
3235	4822 051 20221	220Ω 5% 0,1W	3448	4822 051 10008	0Ω 5% 0,25W
3236	4822 051 20101	100Ω 5% 0,1W	3449	4822 051 20224	220KΩ 5% 0,1W
3237	4822 051 20008	0Ω JUMP. (0805)	3451	4822 051 20224	220KΩ 5% 0,1W
3241	4822 051 20105	1M00 5% 0,1W	3452	4822 051 20224	220KΩ 5% 0,1W
3242	4822 117 10833	10K 1% 0,1W	3453	4822 051 20104	100KΩ 5% 0,1W
3245	4822 117 10833	10K 1% 0,1W	3454	4822 051 20224	220KΩ 5% 0,1W
3246	4822 117 10833	10K 1% 0,1W	3456	4822 051 20008	0Ω JUMP. (0805)
3260	4822 051 20223	22KΩ 5% 0,1W	3458	4822 051 20104	100KΩ 5% 0,1W
3262	4822 051 20182	1K80 5% 0,1W	3460	4822 117 10833	10K 1% 0,1W
3263	4822 051 20223	22KΩ 5% 0,1W	3461	4822 051 20008	0Ω JUMP. (0805)
3265	4822 051 20182	1K80 5% 0,1W	3463	4822 051 20224	220KΩ 5% 0,1W
3266	4822 051 20223	22KΩ 5% 0,1W	3464	4822 051 20224	220KΩ 5% 0,1W
3268	4822 051 20182	1K80 5% 0,1W	3465	4822 117 10833	10K 1% 0,1W
3269	4822 051 20223	22KΩ 5% 0,1W	3468	4822 051 20008	0Ω JUMP. (0805)
3271	4822 051 20182	1K80 5% 0,1W	3470	4822 051 20104	100KΩ 5% 0,1W
3300	4822 117 10833	10K 1% 0,1W	3471	4822 051 20224	220KΩ 5% 0,1W
3301	4822 051 20223	22KΩ 5% 0,1W	3472	4822 051 20102	1KΩ 5% 0,1W
3302	4822 051 20332	3K30 5% 0,1W	3473	4822 051 20473	47KΩ 5% 0,1W
3304	4822 051 20473	47KΩ 5% 0,1W	3474	4822 051 20109	10Ω 5% 0,1W
3306	4822 051 20101	100Ω 5% 0,1W	3475	4822 051 20109	10Ω 5% 0,1W
3307	4822 051 20223	22KΩ 5% 0,1W	3477	4822 051 20109	10Ω 5% 0,1W
3312	4822 051 20008	0Ω JUMP. (0805)	3478	4822 051 20223	22KΩ 5% 0,1W
3313	4822 051 20008	0Ω JUMP. (0805)	3484	4822 051 20224	220KΩ 5% 0,1W
3316	4822 117 10833	10K 1% 0,1W	3485	4822 051 20224	220KΩ 5% 0,1W
3317	4822 051 20109	10Ω 5% 0,1W	3486	4822 051 20273	27KΩ 5% 0,1W
3318	4822 051 20109	10Ω 5% 0,1W	3488	4822 117 10833	10K 1% 0,1W
3319	4822 051 20109	10Ω 5% 0,1W	3500	4822 051 20101	100Ω 5% 0,1W
3320	4822 051 20109	10Ω 5% 0,1W	3502	4822 051 20008	0Ω JUMP. (0805)
3321	4822 051 20109	10Ω 5% 0,1W	3503	4822 051 20472	4K70 5% 0,1W
3322	4822 051 20109	10Ω 5% 0,1W	3504	4822 051 20008	0Ω JUMP. (0805)
3323	4822 051 20109	10Ω 5% 0,1W	3516	4822 051 20101	100Ω 5% 0,1W
3324	4822 051 20109	10Ω 5% 0,1W	3517	4822 051 20101	100Ω 5% 0,1W
3325	4822 117 10833	10K 1% 0,1W	3518	4822 051 20109	10Ω 5% 0,1W
3326	4822 117 10833	10K 1% 0,1W	3520	4822 051 20101	100Ω 5% 0,1W
3329	4822 116 40255	470R 50% PTC 16V	3521	4822 051 20101	100Ω 5% 0,1W
3342	4822 051 20473	47KΩ 5% 0,1W	3522	4822 051 20101	100Ω 5% 0,1W
3404	4822 051 20224	220KΩ 5% 0,1W	3523	4822 051 20472	4K70 5% 0,1W
3405	4822 051 20104	100KΩ 5% 0,1W	3524	4822 051 20472	4K70 5% 0,1W
3406	4822 051 20154	150KΩ 5% 0,1W	3525	4822 051 20473	47KΩ 5% 0,1W
3408	4822 051 20273	27KΩ 5% 0,1W	3526	4822 051 20473	47KΩ 5% 0,1W
3410	4822 051 20473	47KΩ 5% 0,1W	3529	4822 051 20101	100Ω 5% 0,1W
3411	4822 051 20473	47KΩ 5% 0,1W	3531	4822 051 20101	100Ω 5% 0,1W
3412	4822 051 20101	100Ω 5% 0,1W	3533	4822 051 20101	100Ω 5% 0,1W
3414	4822 116 40267	3R3 25% 20V	3534	4822 051 20101	100Ω 5% 0,1W

					
3535	4822 051 20101	100Ω 5% 0,1W	3624	4822 051 20223	22KΩ 5% 0,1W
3536	4822 051 20101	100Ω 5% 0,1W	3625	4822 051 20223	22KΩ 5% 0,1W
3537	4822 051 20101	100Ω 5% 0,1W	3642	4822 117 10833	10K 1% 0,1W
3538	4822 051 20101	100Ω 5% 0,1W	3643	4822 051 20101	100Ω 5% 0,1W
3543	4822 051 20101	100Ω 5% 0,1W	3652	4822 051 20102	1KΩ 5% 0,1W
3545	4822 051 20101	100Ω 5% 0,1W	3658	4822 116 40221	8R2 20%
3546	4822 051 20223	22KΩ 5% 0,1W	3659	4822 051 20101	100Ω 5% 0,1W
3548	4822 051 20101	100Ω 5% 0,1W	3660	4822 116 40221	8R2 20%
3551	4822 051 20101	100Ω 5% 0,1W	3671	4822 051 20008	0Ω JUMP
3552	4822 051 20101	100Ω 5% 0,1W	3673	4822 051 20473	47KΩ 5% 0,1W
3553	4822 051 20008	0Ω JUMP. (0805)	3674	4822 051 20473	47KΩ 5% 0,1W
3555	4822 051 20473	47KΩ 5% 0,1W	3685	4822 051 20008	0Ω JUMP. (0805)
3556	4822 051 20224	220KΩ 5% 0,1W	3687	4822 051 20008	0Ω JUMP. (0805)
3557	4822 051 20473	47KΩ 5% 0,1W	3700	4822 051 20273	27KΩ 5% 0,1W
3558	4822 051 20473	47KΩ 5% 0,1W	3702	4822 051 20122	1K2 5% 0,1W
3560	4822 051 20224	220KΩ 5% 0,1W	3703	4822 051 20334	330KΩ 5% 0,1W
3567	4822 051 20224	220KΩ 5% 0,1W	3704	4822 051 20822	8K2 5% 0,1W
3568	4822 051 20101	100Ω 5% 0,1W	3705	4822 051 20183	18KΩ 5% 0,1W
3569	4822 051 20273	27KΩ 5% 0,1W	3707	4822 117 11139	1k5 5% 0,1W
3571	4822 051 20471	470Ω 5% 0,1W	3708	4822 051 20008	0Ω JUMP. (0805)
3572	4822 051 20104	100KΩ 5% 0,1W	3709	4822 051 20334	330KΩ 5% 0,1W
3573	4822 051 20109	10Ω 5% 0,1W	3710	4822 051 20822	8K2 5% 0,1W
3574	4822 051 20224	220KΩ 5% 0,1W	3711	4822 051 20122	1K2 5% 0,1W
3576	4822 051 20223	22KΩ 5% 0,1W	3712	4822 051 20104	100KΩ 5% 0,1W
3578	4822 051 20223	22KΩ 5% 0,1W	3713	4822 051 20104	100KΩ 5% 0,1W
3579	4822 051 20223	22KΩ 5% 0,1W	3714	4822 051 20104	100KΩ 5% 0,1W
3580	4822 051 20223	22KΩ 5% 0,1W	3715	4822 051 20104	100KΩ 5% 0,1W
3583	4822 051 20223	22KΩ 5% 0,1W	3716	4822 051 20109	10Ω 5% 0,1W
3587	4822 051 20223	22KΩ 5% 0,1W	3738	4822 051 20008	0Ω JUMP. (0805)
3588	4822 117 10833	10K 1% 0,1W	3740	4822 051 20008	0Ω JUMP. (0805)
3589	4822 117 10833	10K 1% 0,1W	3742	4822 051 20008	0Ω JUMP. (0805)
3591	4822 051 20223	22KΩ 5% 0,1W	3753	4822 051 20008	0Ω JUMP. (0805)
3592	4822 051 20223	22KΩ 5% 0,1W	3757	4822 051 20008	0Ω JUMP. (0805)
3593	4822 051 20223	22KΩ 5% 0,1W	3762	4822 051 20008	0Ω JUMP. (0805)
3595	4822 051 20473	47KΩ 5% 0,1W	3764	4822 051 20473	47KΩ 5% 0,1W
3596	4822 051 20473	47KΩ 5% 0,1W	3765	4822 051 20224	220KΩ 5% 0,1W
3597	4822 051 20102	1KΩ 5% 0,1W	3766	4822 051 20473	47KΩ 5% 0,1W
3598	4822 051 20101	100Ω 5% 0,1W	3767	4822 051 20008	0Ω JUMP. (0805)
3599	4822 051 20101	100Ω 5% 0,1W	3768	4822 051 20008	0Ω JUMP. (0805)
3600	4822 051 20101	100Ω 5% 0,1W	3769	4822 051 20008	0Ω JUMP. (0805)
3601	4822 051 20101	100Ω 5% 0,1W	3802	4822 051 20008	0Ω JUMP. (0805)
3603	4822 051 20101	100Ω 5% 0,1W	3803	4822 051 20008	0Ω JUMP. (0805)
3604	4822 051 20101	100Ω 5% 0,1W	3804	4822 051 20008	0Ω JUMP. (0805)
3605	4822 051 20101	100Ω 5% 0,1W	3810	4822 051 20008	0Ω JUMP. (0805)
3607	4822 051 20101	100Ω 5% 0,1W	3811	4822 051 20561	560Ω 5% 0,1W
3608	4822 051 20101	100Ω 5% 0,1W	3812	4822 051 20101	100Ω 5% 0,1W
3610	4822 051 20101	100Ω 5% 0,1W	3813	4822 117 10833	10K 1% 0,1W
3611	4822 051 20101	100Ω 5% 0,1W	3814	4822 051 20008	0Ω JUMP. (0805)
3612	4822 051 20101	100Ω 5% 0,1W	3815	4822 051 20473	47KΩ 5% 0,1W
3613	4822 051 20101	100Ω 5% 0,1W	3816	4822 051 20473	47KΩ 5% 0,1W
3614	4822 051 20101	100Ω 5% 0,1W	3817	4822 051 20473	47KΩ 5% 0,1W
3615	4822 051 20101	100Ω 5% 0,1W	3825	4822 051 20331	330Ω 5% 0,1W
3616	4822 051 20101	100Ω 5% 0,1W	3830	4822 051 20221	220Ω 5% 0,1W
3617	4822 051 20101	100Ω 5% 0,1W	3831	4822 051 20221	220Ω 5% 0,1W
3618	4822 051 20101	100Ω 5% 0,1W	3832	4822 051 20331	330Ω 5% 0,1W
3619	4822 051 20101	100Ω 5% 0,1W	3834	4822 051 20102	1KΩ 5% 0,1W
3620	4822 051 20101	100Ω 5% 0,1W	3835	4822 117 11449	2K2 1% 0,1W
3621	4822 051 20101	100Ω 5% 0,1W	3836	4822 051 20104	100KΩ 5% 0,1W
3622	4822 051 20101	100Ω 5% 0,1W	3837	4822 051 20102	1KΩ 5% 0,1W
3623	4822 051 20101	100Ω 5% 0,1W	3838	4822 051 20102	1KΩ 5% 0,1W

					
3839	4822 051 20105	1M00 5% 0,1W	6653	4822 130 10657	PTZ
3840	4822 051 20102	1KΩ 5% 0,1W	6654	4822 130 10657	PTZ
3841	4822 051 20102	1KΩ 5% 0,1W	6741	4822 130 83757	BAS216
3845	4822 051 20008	0Ω JUMP. (0805)	6802	4822 130 10658	UDZ11B
3850	4822 051 20101	100Ω 5% 0,1W	6803	4822 130 10185	UDZ5.6B
3852	4822 117 1 0833	10KΩ 1% 0,1W	6804	4822 130 10185	UDZ5.6B
3854	4822 051 20008	0Ω JUMP. (0805)	6805	4822 130 10185	UDZ5.6B
3855	4822 051 20104	100KΩ 5% 0,1W	6807	4822 130 10185	UDZ5.6B
3856	4822 117 1 0833	10KΩ 1% 0,1W	6808	4822 130 83757	BAS216
3857	4822 051 20333	33KΩ 5% 0,1W	6809	4822 130 10185	UDZ5.6B
3858	4822 051 20008	0Ω JUMP. (0805)	6810	4822 130 10185	UDZ5.6B
3863	4822 051 20101	100Ω 5% 0,1W	6811	4822 130 83757	BAS216
3864	4822 051 20104	100KΩ 5% 0,1W	6817	4822 130 83757	BAS216
3865	4822 051 20101	100Ω 5% 0,1W	6850	4822 130 83757	BAS216
3866	4822 051 20101	100Ω 5% 0,1W	6852	4822 130 10185	UDZ5.6B
3867	4822 051 20471	470Ω 5% 0,1W	6853	4822 130 10185	UDZ5.6B
3871	4822 051 20008	0Ω JUMP. (0805)			
3872	4822 051 20101	100Ω 5% 0,1W			
					
5172	4822 157 10975	120UH 10%	7200	4822 130 60511	BC847B
5173	4822 157 10976	68UH 10%	7201	4822 209 14813	SAA7701H/N108
5174	4822 157 71206	BLM21A10PT	7202	4822 209 33985	TDA8579T/N1
5200	4822 157 71206	BLM21A10PT	7203	4822 130 60511	BC847B
5201	4822 242 10565	K1101-36.860MHZ	7260	4822 130 42615	BC817-40
5202	4822 157 71184	10UH 10%	7261	4822 130 42615	BC817-40
5203	4822 157 10976	68UH 10%	7262	4822 130 42615	BC817-40
5204	4822 157 71206	BLM21A10PT	7263	4822 130 42615	BC817-40
5205	4822 157 10977	4,7UH 10%	7302	4822 209 33629	TDA7375
5400	4822 157 70935	COIL	7303	4822 209 33629	TDA7375
5401	4822 157 11072	LALO4 0U22 BEND.17,78	7304	4822 130 60511	BC847B
5402	4822 157 71184	10UH 10%	7401	4822 209 14814	L4949NP
5403	4822 157 71184	10UH 10%	7402	5322 209 14877	HEF4528BT
5501	4822 157 71206	BLM21A10PT	7403	5322 209 11368	HEF4043BT
5503	4822 157 71206	BLM21A10PT	7404	4822 209 14815	VN06SP
5650	4822 242 81002	CST6,00MGW-TF01	7405	4822 209 90566	L4885CV BENDED
5651	4822 157 71206	BLM21A10PT	7406	4822 209 15099	L7805 ABV CUTED 7,75
5835	4822 242 81583	LN-G8-238	7410	4822 130 60511	BC847B
			7411	5322 130 60508	BC857B
			7413	5322 130 60508	BC857B
					
6200	4822 130 10654	BAT254	7416	4822 130 60511	BC847B
6300	4822 130 83757	BAS216	7418	4822 209 33162	MC4558IDT
6401	4822 130 10488	S3G	7505	5322 130 60508	BC857B
6402	4822 130 10655	1SR154-400	7506	5322 209 11102	HEF4052BT
6403	4822 130 10655	1SR154-400	7507	5322 209 60424	74HC573D
6406	4822 130 10656	UDZ20B	7512		
6407	4822 130 10655	1SR154-400	7513	4822 209 14817	P80CE559EFB/00
6408	4822 130 10655	1SR154-400	7514	5322 130 60508	BC857B
6411	4822 130 10654	BAT254	7600	4822 209 14819	74HC251D
6412	4822 130 10655	1SR154-400	7601	4822 209 14819	74HC251D
6413	4822 130 10654	BAT254	7602	4822 209 91136	74HC259D
6414	4822 130 83757	BAS216	7603	4822 209 14821	74HC42D
6415	4822 130 83757	BAS216	7650	4822 209 32743	MSM6307GS-VK
6418	4822 130 83757	BAS216	7651	4822 130 60511	BC847B
6421	4822 130 83757	BAS216	7700	4822 209 33237	TEA0677N
6425	4822 130 83757	BAS216	7745	4822 130 60511	BC847B
6426	4822 130 83757	BAS216	7803	4822 130 60511	BC847B
6427	4822 130 83757	BAS216	7804	5322 130 60508	BC857B
6428	4822 130 83757	BAS216	7835	5322 209 11461	HEF4521BT
6432	4822 130 83757	BAS216	7850	4822 130 60511	BC847B
6500	4822 130 83757	BAS216			

Detachable front electrical partslist

					
2900	5322 122 32654	22NF10%X7R 63V	6907	4822 130 10186	LYT670-JK-E9231
2901	5322 122 32654	22NF10%X7R 63V	6909	4822 130 10186	LYT670-JK-E9231
2902	5322 122 32654	22NF10%X7R 63V	6911	4822 130 10186	LYT670-JK-E9231
2903	5322 122 34123	1NF10%X7R 50V	6913	4822 130 10186	LYT670-JK-E9231
			6915	4822 130 10186	LYT670-JK-E9231
			6917	4822 130 10186	LYT670-JK-E9231
			6919	4822 130 10186	LYT670-JK-E9231
			6921	4822 130 10186	LYT670-JK-E9231
3900	4822 117 11449	2K2 1% 0,1W	6923	4822 130 10186	LYT670-JK-E9231
3901	4822 051 20182	1K80 5% 0,1W	6925	4822 130 10186	LYT670-JK-E9231
3902	4822 051 20471	470R00 5% 0,1W	6927	4822 130 10186	LYT670-JK-E9231
3904	4822 117 11139	1K5 1% 0,1W	6929	4822 130 10186	LYT670-JK-E9231
3905	4822 051 20221	220R00 5% 0,1W	6931	4822 130 10186	LYT670-JK-E9231
3906	4822 051 20221	220R00 5% 0,1W	6933	4822 130 10186	LYT670-JK-E9231
3907	4822 051 20221	220R00 5% 0,1W	6935	4822 130 10186	LYT670-JK-E9231
3908	4822 117 10833	10K 1% 0,1W	6941	4822 130 10186	LYT670-JK-E9231
3909	4822 051 20473	47K00 5% 0,1W	6943	4822 130 10186	LYT670-JK-E9231
3911	4822 117 11449	2K2 1% 0,1W	6945	4822 130 10186	LYT670-JK-E9231
3912	4822 051 20121	120R00 5% 0,1W	6947	4822 130 10186	LYT670-JK-E9231
3913	4822 051 20121	120R00 5% 0,1W	6953	4822 130 83757	BAS216
3914	4822 051 20121	120R00 5% 0,1W	6954	4822 130 83757	BAS216
3915	4822 051 20182	1K80 5% 0,1W	6955	4822 130 83757	BAS216
3916	4822 051 20332	3K30 5% 0,1W	6956	4822 130 83757	BAS216
			6957	4822 130 83757	BAS216
3917	4822 051 20332	3K30 5% 0,1W			
3919	4822 117 11449	2K2 1% 0,1W			
3921	4822 117 10353	150R 1% 0,1W			
3923	4822 051 20008	0R00 JUMP. (0805)			
3924	4822 051 20104	100K RST SM 0805 5%			
3942	4822 117 10353	150R 1% 0,1W			
3943	4822 117 10353	150R 1% 0,1W			
3944	4822 117 10353	150R 1% 0,1W			
3945	4822 117 10353	150R 1% 0,1W			
3946	4822 117 10353	150R 1% 0,1W			
3947	4822 051 20008	0R00 JUMP 0805	7900	5322 209 11578	PCF8574T
3948	4822 051 20221	220R00 5% 0,1W	7901	5322 209 60424	74HC573D
3949	4822 051 20221	220R00 5% 0,1W	7902	5322 130 60508	BC857B
3950	4822 051 20221	220R00 5% 0,1W	7904	4822 130 42132	BC807
3951	4822 051 20221	220R00 5% 0,1W	7905	4822 130 42615	BC817-40
3952	4822 051 20221	220R00 5% 0,1W	7906	4822 130 42615	BC817-40
3953	4822 051 20331	330R00 5% 0,1W	7907	4822 130 60511	BC847B
3955	4822 051 20271	270R00 5% 0,1W	7911	4822 209 15134	
3961	4822 117 10833	10K 1% 0,1W			
3962	4822 117 11449	2K2 RST SM 0805 5%			
3963	4822 117 11449	2K2 RST SM 0805 5%			
3964	4822 117 11449	2K2 RST SM 0805 5%			
3965	4822 117 11449	2K2 RST SM 0805 5%			
3966	4822 051 20121	120R00 5% 0,1W			
3967	4822 051 20478	4R70 5% 0,1W			
3968	4822 051 20101	100R00 5% 0,1W			
3969	4822 051 20101	100R00 5% 0,1W			
3971	4822 051 20271	270R00 5% 0,1W			
3972	4822 051 20101	100R00 5% 0,1W			
3973	4822 117 10833	10K 1% 0,1W			
					
6900	4822 130 10185	UDZ5.6B			
6901	4822 130 10185	UDZ5.6B			
6902	4822 130 10185	UDZ5.6B			
6904	4822 130 83757	BAS216			
6905	4822 130 83757	BAS216			

A97-201

22RC548 - 22RC668

Service
Service
Service

Car Systems Service

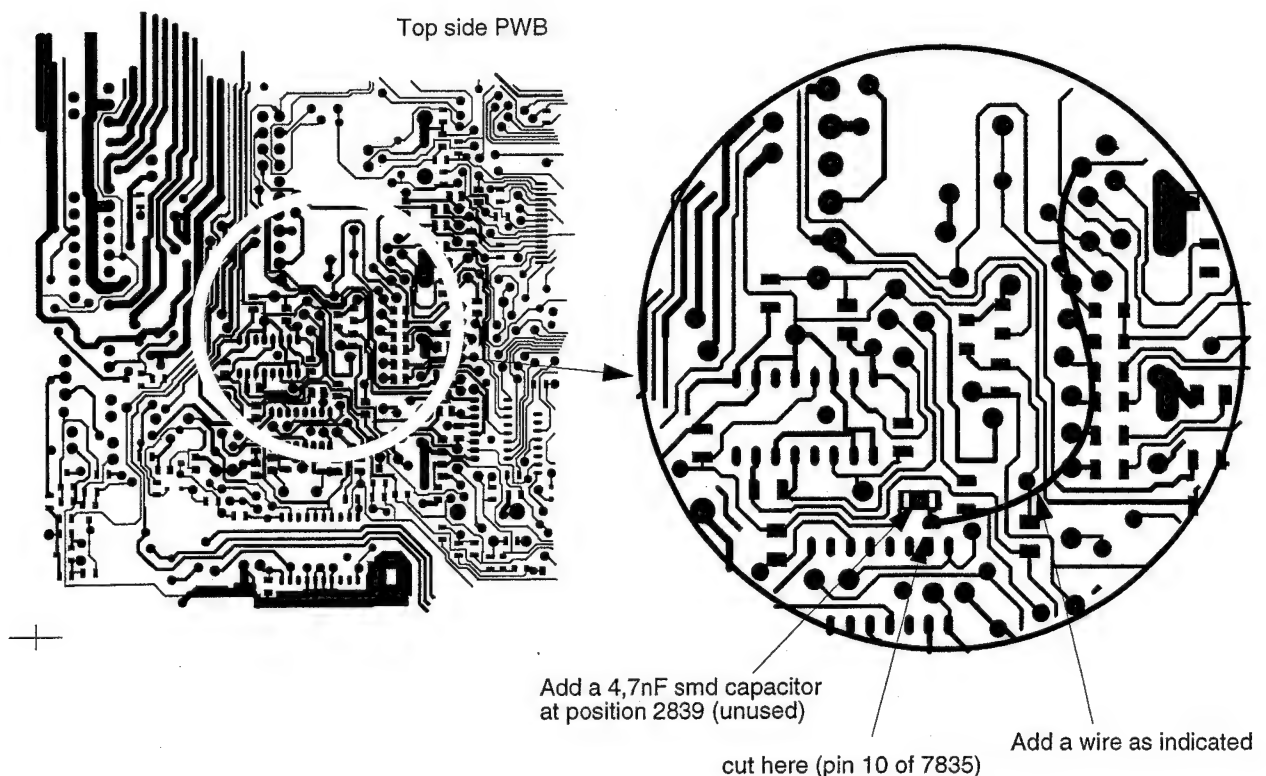
Service Information

1- 22RC668

In case of set coming for repair with the following complaint : Keys "source" and "preset1" inactive
(For sets produced before week 9651), you must apply the following solution:
Change the back cover item 2034822 426 10272. (The service stock is adapted)
Check the soldering of the diode 6957 and change it if necessary.

2- 22RC548 - 22RC668

In case of set coming for repair with the following complaint : Set switches on and off itself at low temperature, you must apply the following solution: add a 4.7 nF capacitor between pins 2 and 4 of 7403.
This consists in cutting a track, and add the capacitor and a wire according to the drawing.



PHILIPS

5128

Cassette Car Radio 22RC548 - 578/00**CD Car Radio 22RC668 - 688/00**

Service
Service
Service

CLASS 1
LASER PRODUCT

Supplement

Service Manual

12 V 

This supplement must be used from factory change code FD01 onwards.

From this change code, the main PWB, the front PWB and the schematic diagrams are changed. The main change is in the UP parts: the main microprocessor is now with integrated ROM instead of separate ROM.

Therefore, the part UP01 is deleted, and the insulating covers are no more necessary.

Some values are changed also into the "Checks and alignment" tables.

A complete new electrical partslist is issued.

This supplement must be used together with Service Manual 4822 725 24389.

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Technician's remarks

Check and Alignment

For all measurements, please refer to the manual “General Check & Alignment procedures for Car Systems” 4822 725 25456, unless otherwise stated.

Current and voltage

1) SET OFF

SET OFF	Voltage	Current +Acc ON	Current +Acc OFF	Supply μ P pin 14 7513	V_LOW pin 34 7513
Acc Supply	+12.6V	< 2mA		min 4.5V max 5.2V	min 2V max 5.3V
Perm Supply	+12.6V	< 2mA	<3 mA		

2) SET ON (A6 not connected)

Reset pin 30	Supply μ P pin 14 7513		V_LOW pin 34 7513		5V pin3 L7805 ABV		8.5V pin 3 L4885CV		V EEprom	
max 0.8V	min 4.5	max 5.2	min 2	max 5.3	min 4.8	max 5.2	min 8.2	max 8.8	min 4.5	max 5.2

Reference oscillator frequencies (to be measured via a X10 probe)

device	MSM 6307	83CE558	HEF4521	SAA7701	HEF4528
pin	24 & 25	51 & 52	4 & 6	63 & 64	9
frequency	6 MHz 0.5%	16 MHz 0.5%	4.194304 MHz 20 ppm	36.860 MHz 60 ppm	1 Hz 20%

Checks:

1) FM

FM mute	98 MHz 1mV	output at load resistor R & L = 775 mV = REF
	no signal	output should be < -24 dB (REF - 24 dB)

Demodulated FM level	98 MHz	215 mV 2dB
	Input	MPX Output of IC96 (pin 10)

Limiting point α -3dB	FM 98MHz	1mV 400Hz	6 μ V	4 μ V	9 μ V
	RANGE	INPUT	NOMINAL	MIN	MAX

Search levels	Input	Dx: 10 μ V < X < 20 μ V Local : 190 μ V < X < 290 μ V
	98 MHz	

2) AM

Demodulated AM level	1053KHz - m=30% - 1KHz	230 mV 2dB
	Input	Audio output of IC96 (pin 19)

Sensitivity at 26dB S/N	162KHz	m = 30%	400Hz	< 38 μ V
	1053KHz			< 30 μ V
	6100KHz			<25 μ V

Search levels	Input	Dx: 10 μ V < X < 20 μ V Local : 35 μ V < X < 100 μ V
	1053KHz	

No alignment is needed for radio part. The tuner module IC96 is pre-aligned in the factory. Dolby alignment, crosstalk alignment and FM DC level curve learning procedure are performed via a special equipment and software, not yet available in Service. Some values are stored in the EEprom. The EEprom available in service will contain mean values, that could affect slightly the performance of the set. It is the only solution until further notice. The service code of this EEprom will be given in a next Service Newsletter. If you change the tuner module, change also the EEprom.

Deck part (for RC548/578)

Use test cassette SBC420 4822 397 30071 unless otherwise stated.

Tape speed and flutter: Use 3.15KHz test tone	Supply voltage	Tape speed	Flutter
	10.8 - 15.6 V	4.76cm/s 2%	< 0.3%

Crosstalk : use 1KHz 0dB crosstalk signal	< -40dB at speakers output R & L
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CD part (for RC668/688)

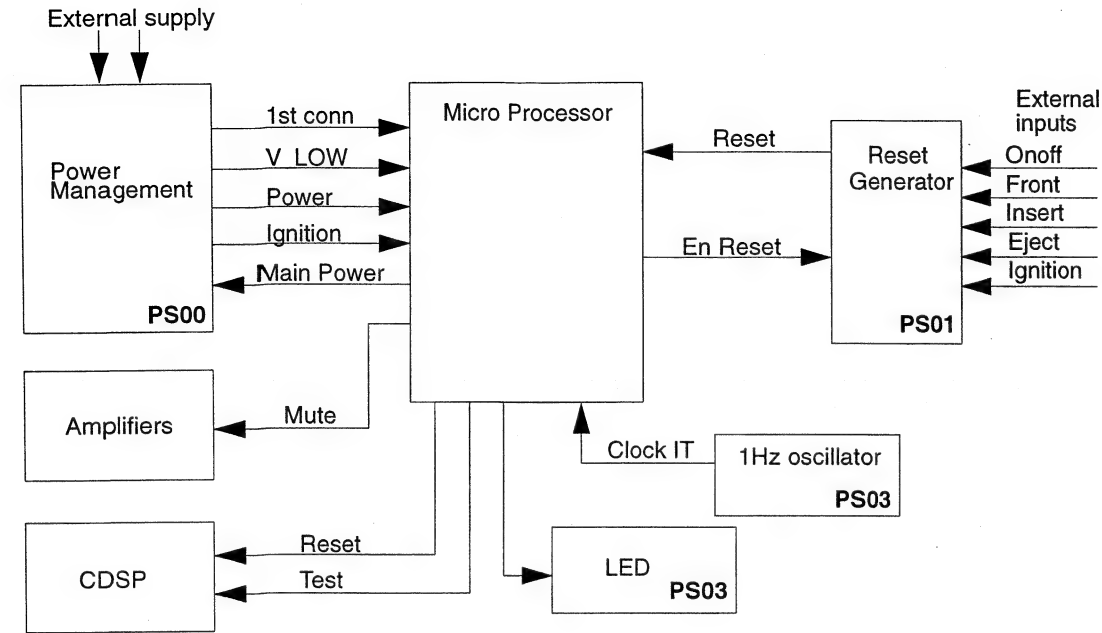
Test CD	Test	Result
Eccent-music 150um 4822 397 30279	Insert disk and play track 01	No failure
Vertical deviation 4822 397 30282	Check loading, display of number of tracks and total time. Select track no 9 time 00.20 listen to the disk during 4 seconds	no electrical nor mechanical noise

Test CD	Test		Result
Audio signal disk 1 4822 397 30184	Compression Off	Crosstalk track 67 and 71	Crosstalk < -65dB
	Compression On		Crosstalk < -30dB (comp 1 by default)

Signal to noise ratio

A weighted filter, track 1 versus track 49 of disk 1	
Compression Off	S / N > 75dB
Compression On (default 1)	S / N > 45dB

POWER SUPPLY ORGANIZATION



Short explanation

The reset is generated after a user action by the reset generator. Its task is to generate resets to the micro p. at input change and at power recovery (when V_LOW (pin 14 7403) is high again) only when EnReset (pin 12 7402) input is low.
If EnReset is high, no resets are expected (set is ON).
The Power Management device gives information about supply to the micro p. and provides two digital outputs (1st conn, V_LOW (pin 11 7401)), two analog outputs (Power, Ignition) and one digital input (Main Power).
The 1st connection information is a fugitive information (around 100ms, available on RESET_uC) which is memorized by the micro p. and leads to first connection actions such as RAM clear. The V_LOW output is connected to an interrupt and goes LOW when power is falling under 8V (in fact 7.9 to 9.8V, due to spread of components). It goes high again when power comes back.
Power and Ignition analog outputs are provided to enable the micro p. to measure both supply voltages. Main power is an input that turns On and Off the power on the board.
Mute, reset and test output pins of the micro p. are performing actions on amplifiers and CDSP while the one hertz oscillator allows to update internal system clock.

1) Reset at first connection

At the first connection of the set to supplies, a "Power-on-reset" (1st_PWR_ON) will be generated via regulator L4949. This hardware reset is active till the 5V for the micro p. is stable.

2) Reset by input lines while set is OFF

The set is awoken by the an hardware reset while the micro p. is in OFF state (power down mode). Several inputs can generate the reset.

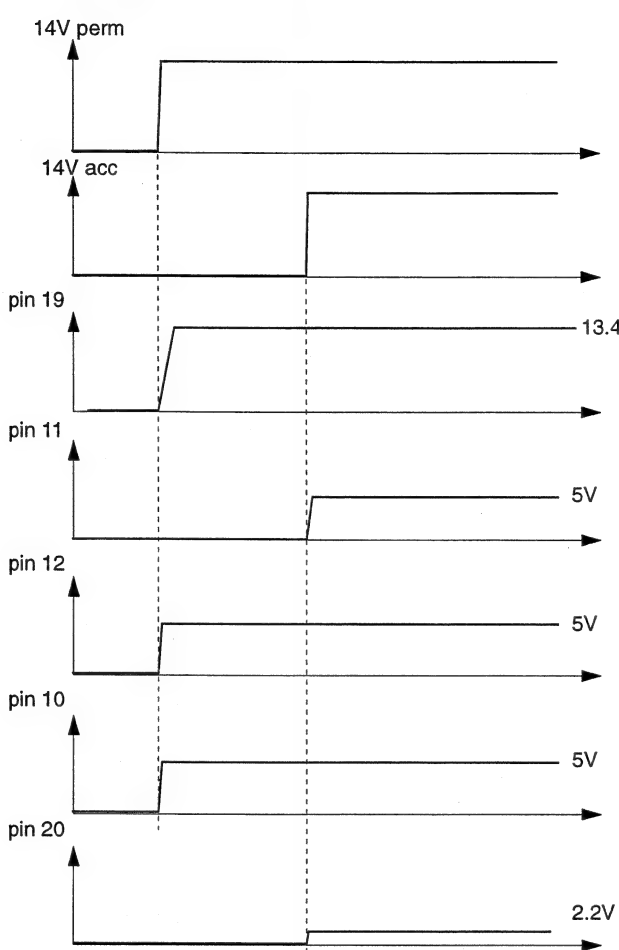
- ☐ Ignition key
- ☐ OnOff key
- ☐ Tape / CD insert
- ☐ Tape / CD eject
- ☐ Low voltage (V_LOW) - transition low to high voltage
- ☐ Front detection

Via the different interface the inputs are connected to one of the two inputs of the reset circuitry (Pin 4 or 11 of 7402)

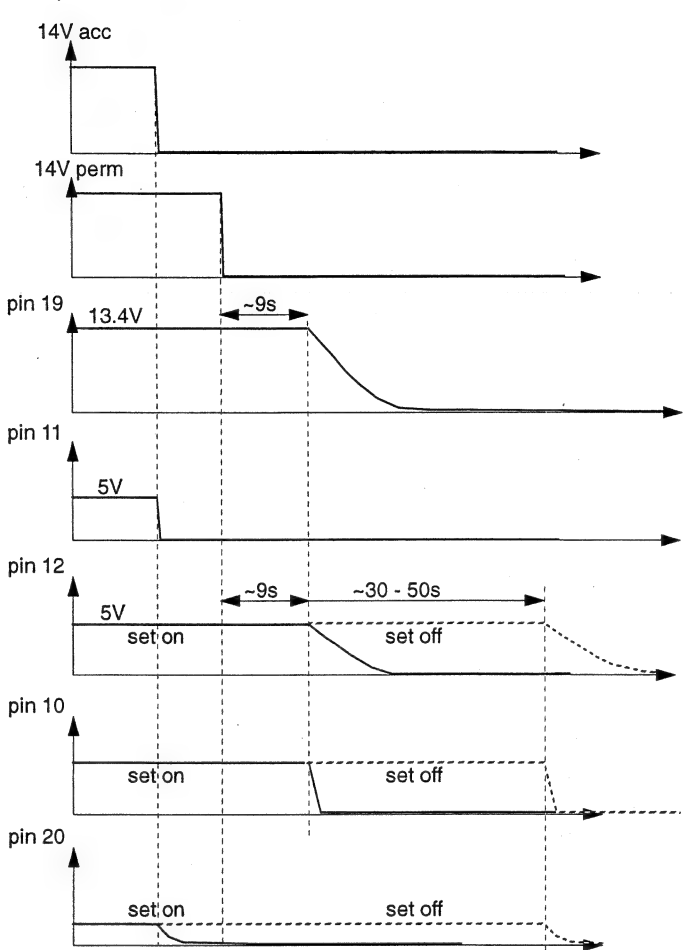
With a transition on any of the input lines, a 1ms duration reset (RESET_uC in schematic PS01) is generated, which leads to wake up the micro p. from the power down mode. At the same time, the reset will be disabled. The micro p. is then able to check the reset origin and to decide at least if the set must switch on or not.

Waveforms on IC 7401 L4949N

1) Set OFF



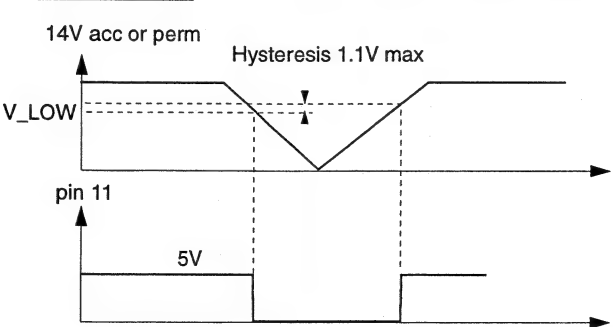
2) Set ON



3) V_LOW handling

If a V_LOW occurs during set is On or during set On/Off procedure is performed, the micro p. switches Off the set and finishes the write EEpom activities. After this actin the hardware reset generation will be enabled and the micro p. goes to power down.

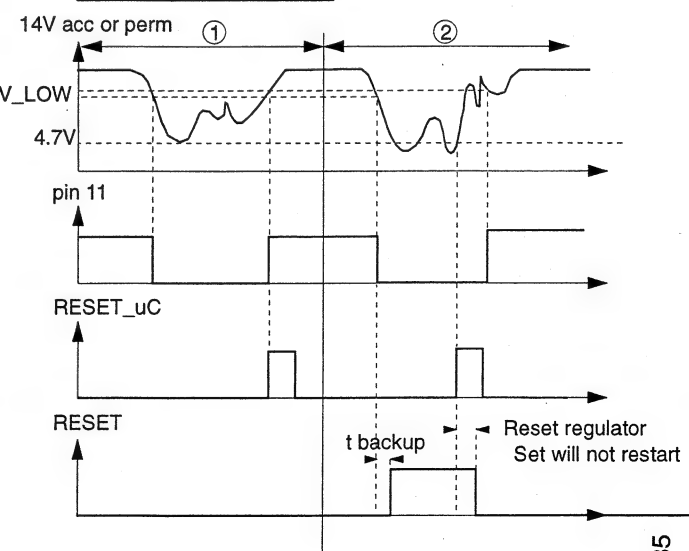
V_LOW handling

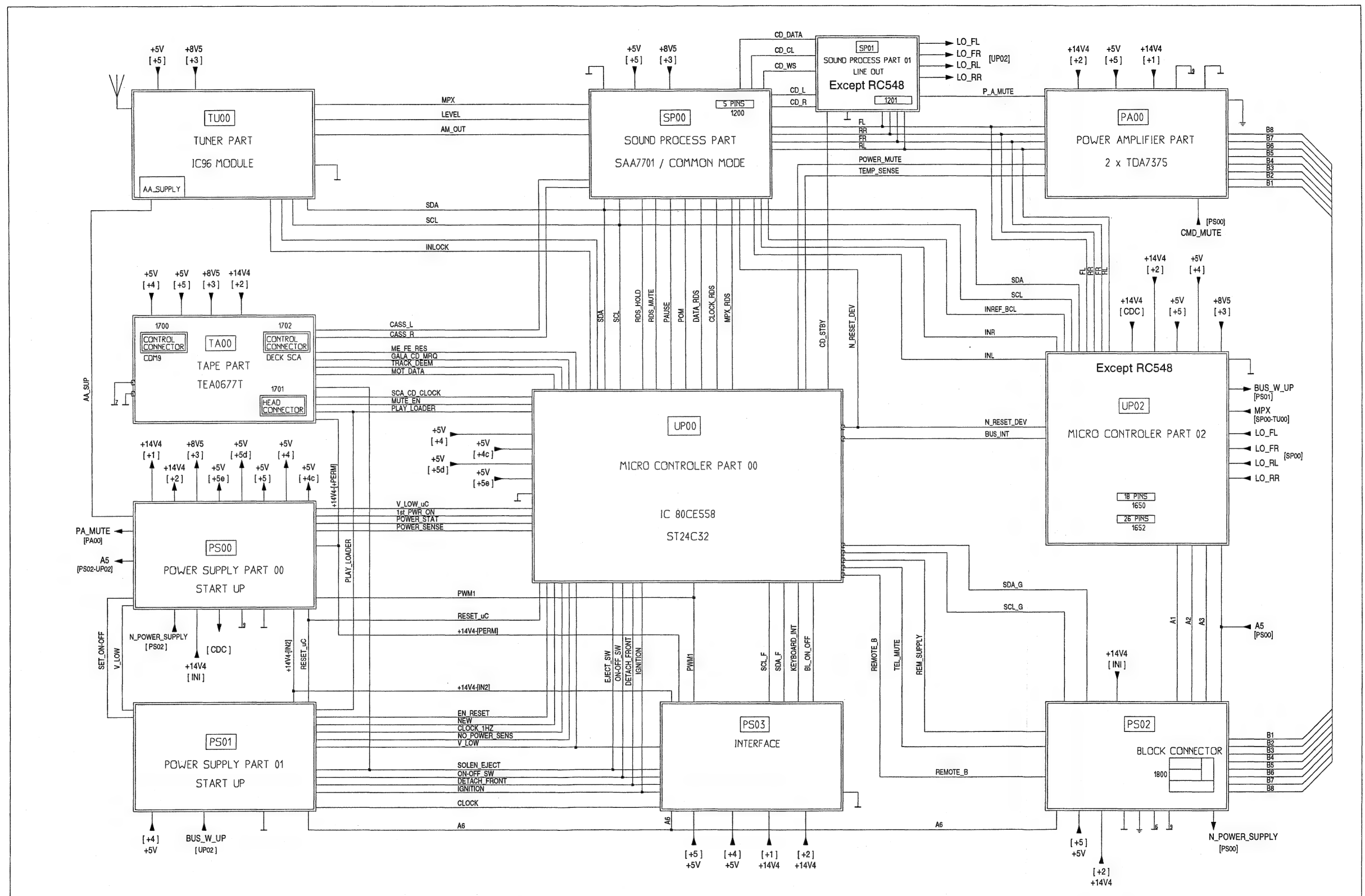


Case ① The set is On, the permanent supply falls down but is over 4.7V

Case ② The set is On, the permanent supply falls down below 4.7V for longer than backup time

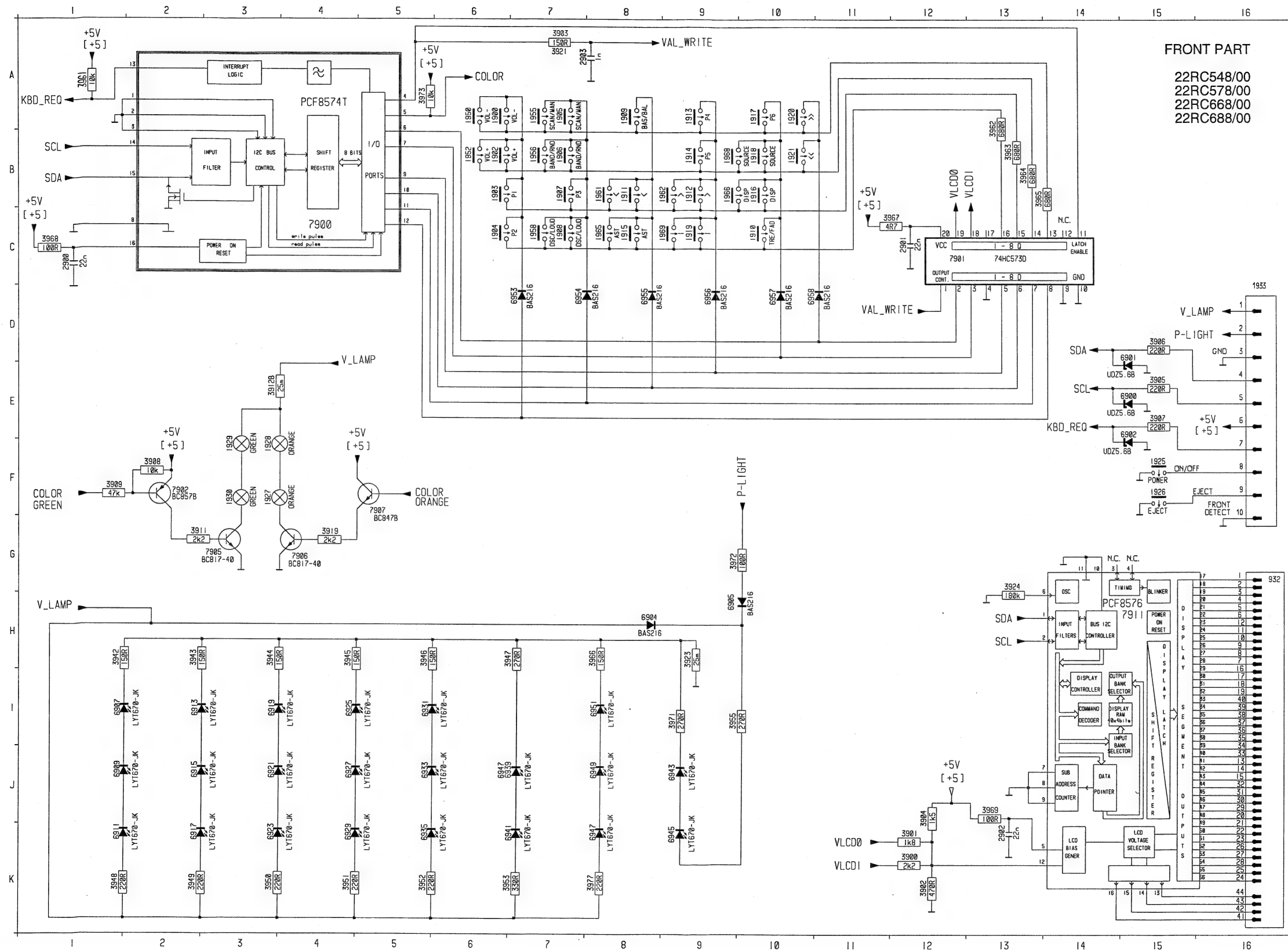
Behaviour while engine start





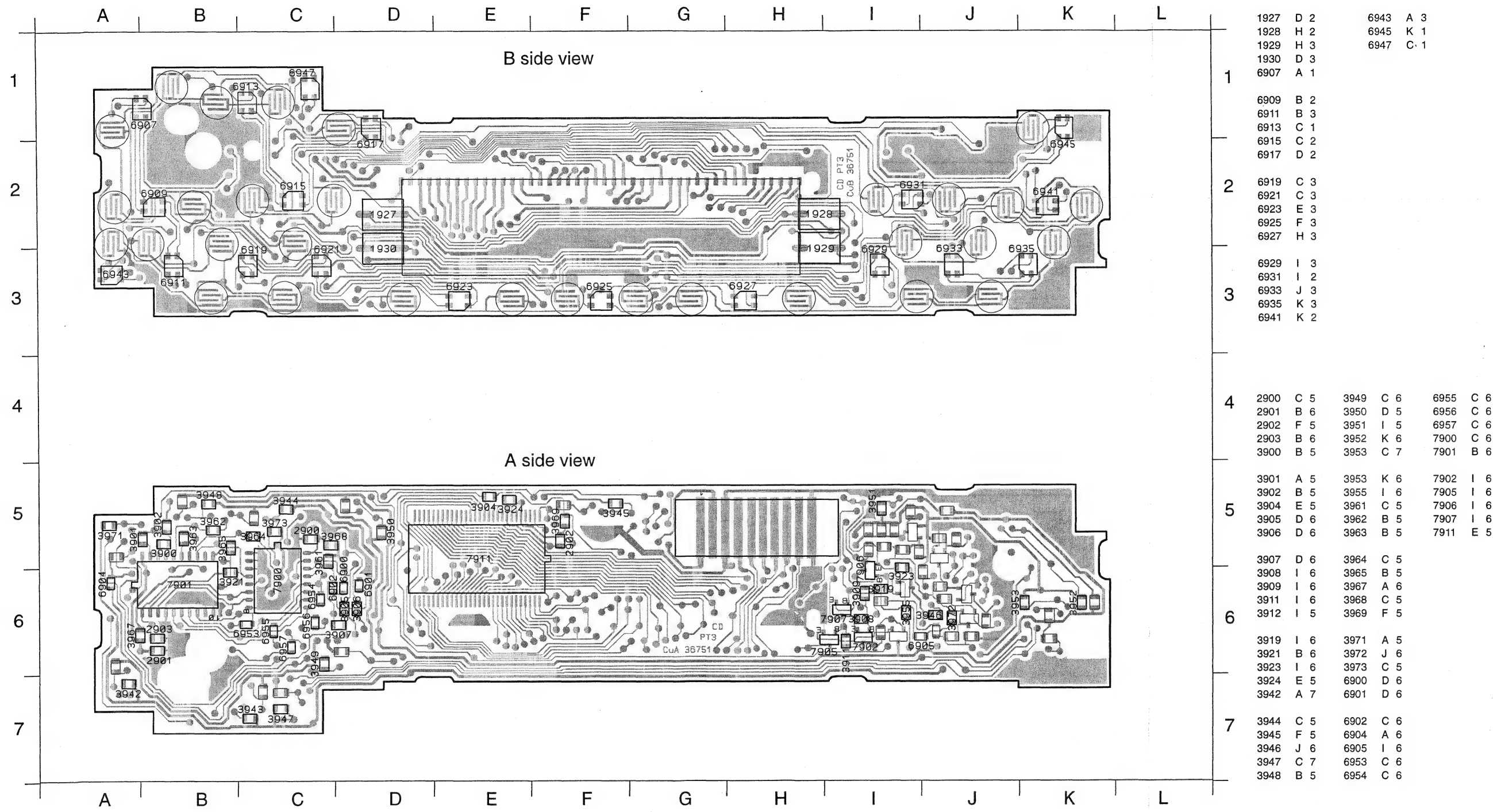
ELECTRICAL BLOC DIAGRAM

22DC548/00
22DC578/00
22DC668/00
22DC688/00



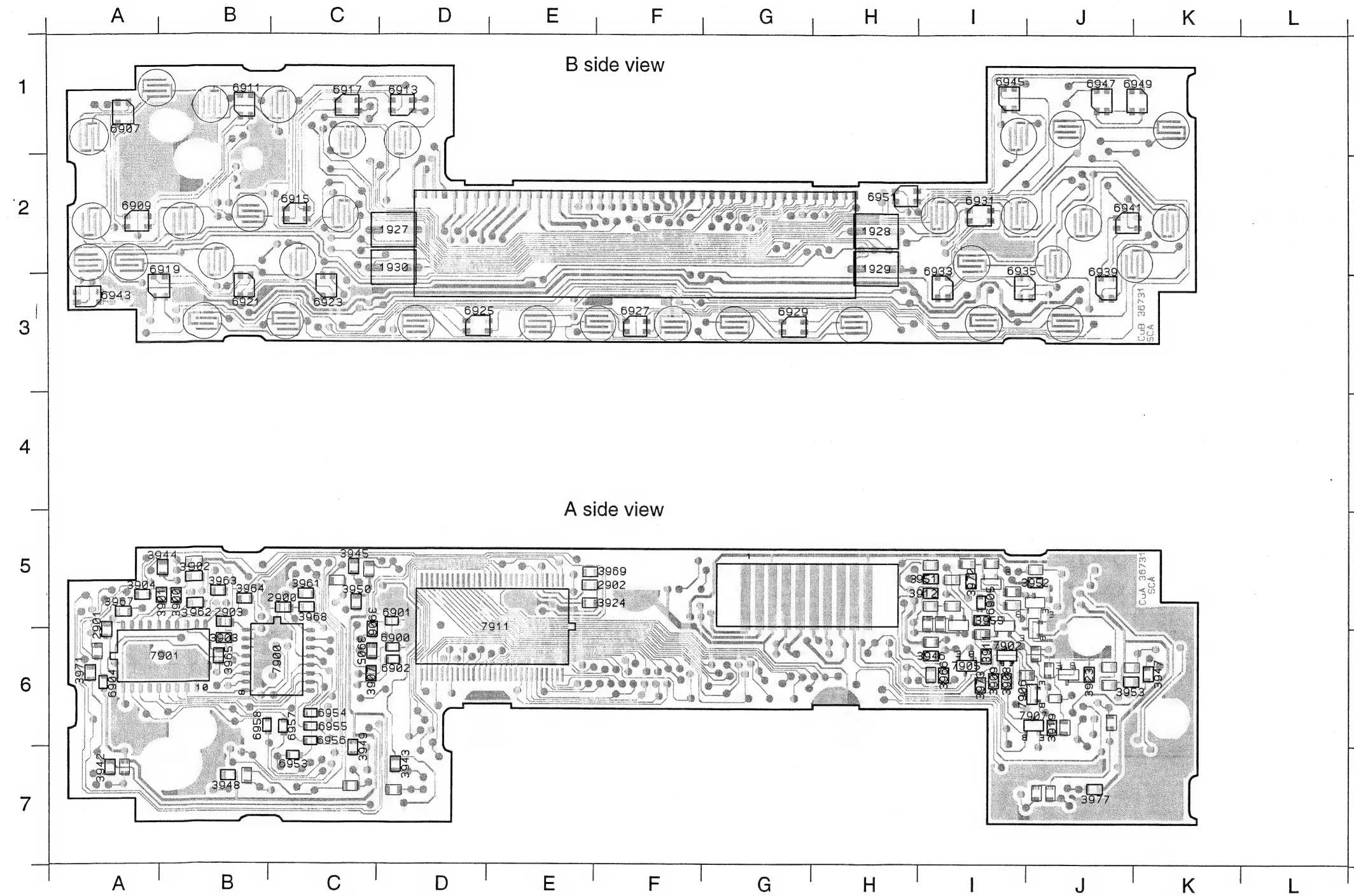
1900	A 6	3953	K 7
1902	B 6	3955	I 9
1903	B 6	3961	A 1
1904	C 6	3962	A 13
1905	A 7	3963	B 13
1906	B 7	3964	B 13
1907	B 7	3965	B 13
1908	C 7	3966	H 8
1909	A 8	3967	C 12
1910	C 10	3968	C 1
1911	B 8	3969	J 13
1912	B 9	3971	I 9
1913	A 9	3972	G 9
1914	B 9	3973	A 5
1915	C 8	3977	K 8
1916	B 10	6900	E 15
1917	A 10	6901	D 15
1918	B 10	6902	E 15
1919	C 9	6904	H 8
1920	A 10	6905	H 9
1921	B 10	6907	I 1
1925	F 15	6909	J 1
1926	F 15	6911	K 1
1927	F 3	6913	I 2
1928	F 3	6915	J 2
1929	F 3	6917	K 2
1930	F 3	6919	I 3
1932	G 16	6921	J 3
1933	D 16	6923	K 3
1950	A 6	6925	I 4
1952	B 6	6927	J 4
1955	A 7	6929	K 4
1956	B 7	6931	I 5
1958	C 7	6933	J 5
1961	B 8	6935	K 5
1962	B 9	6939	J 7
1965	C 8	6941	K 7
1966	B 9	6943	J 9
1968	B 9	6945	K 9
1969	C 9	6947	K 8
2900	C 1	6949	J 8
2901	C 12	6951	I 8
2902	K 13	6953	D 7
2903	A 7	6954	D 7
3900	K 12	6955	D 8
3901	K 12	6956	D 9
3902	K 12	6957	D 10
3903	A 7	6958	D 10
3904	J 12	7900	C 4
3905	E 15	7901	C 12
3906	D 15	7902	F 2
3907	E 15	7905	G 3
3908	F 2	7906	G 4
3909	F 1	7907	F 5
3911	G 2	7911	H 15
3912B	E 3		
3919	G 4		
3923	H 9		
3924	G 13		
3942	H 1		
3943	H 2		
3944	H 3		
3945	H 4		
3946	H 5		
3947	H 7		
3948	K 1		
3949	K 2		
3950	K 3		
3951	K 4		
3952	K 5		

DETACHABLE FRONT PWB FOR 22RC668 - 22RC688



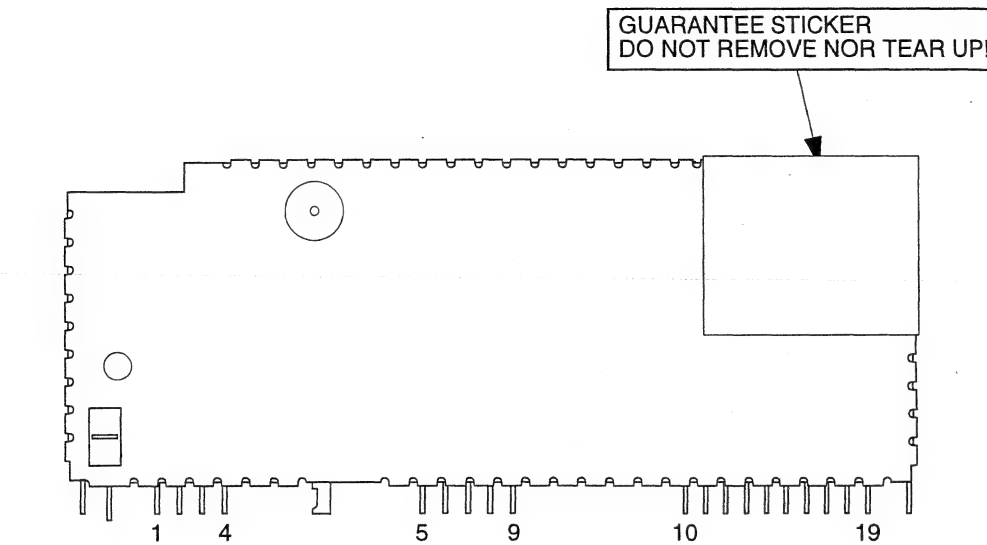
Differences with previous version: deleted 3913 - 3914 - 3915 - 3916 - 3917 - 3966 - 7904

DETACHABLE FRONT PWB FOR 22RC548 - 22RC578



IC96 MODULE

Not repairable module. Do not open and do not try to repair yourself!



Connections

- | | |
|-----------------------|----------------------------------|
| 1 AM/FM Aerial input | 10 Multiplex / RDS output signal |
| 2 Ground | 11 Unweighted level output |
| | 12 I ² C SDA |
| 5 Inlock detector pin | 13 I ² C SCL |
| 6 Vcc 8.5V | 14 SDS time constant pin |
| 7 Ground | 17 Ground |
| 8 Vcc 5.0V | 19 AM audio output |
| 9 V reference | |

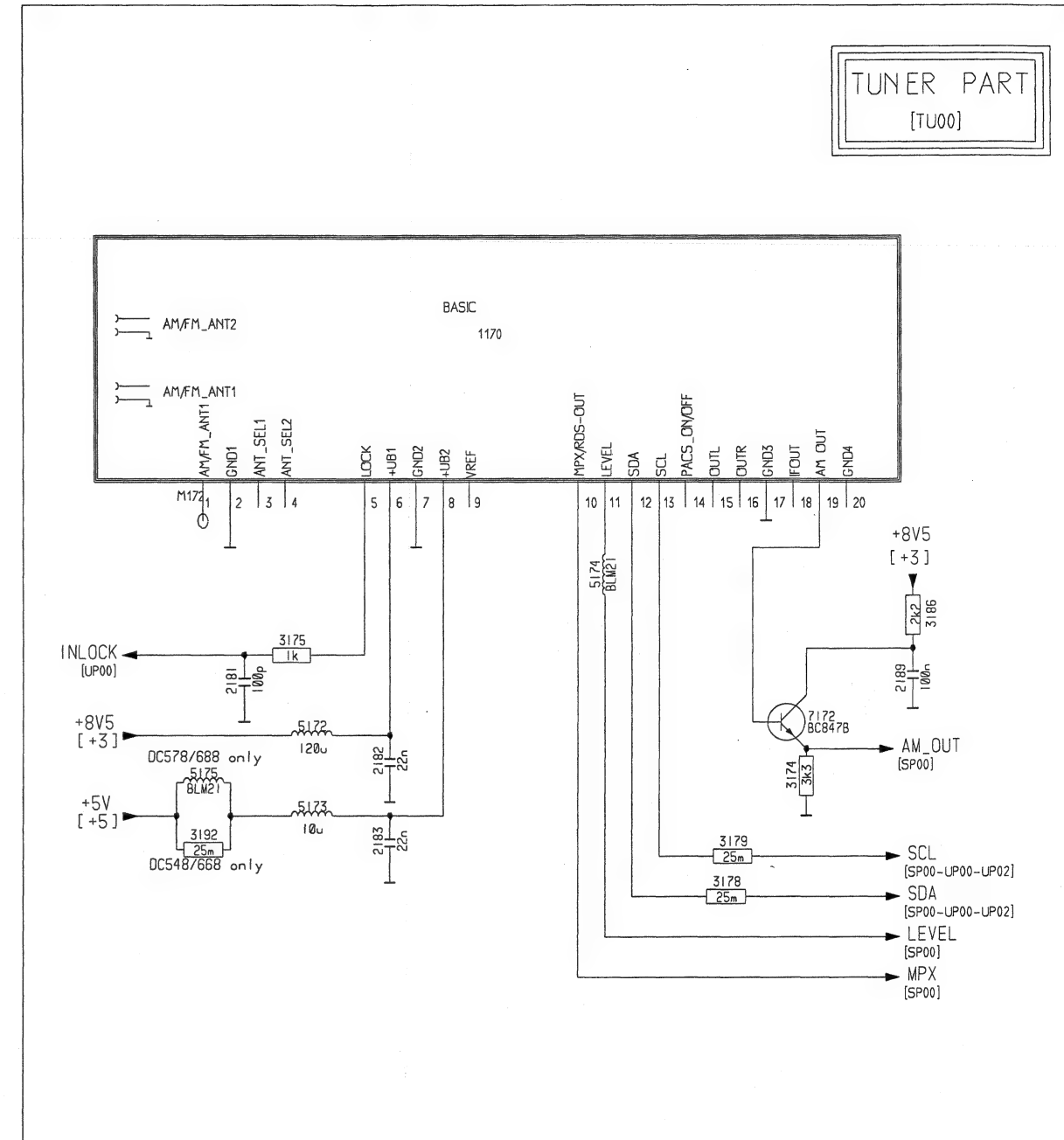
Quick reference data:

1) AM part

- Longwave/Mediumwave 144-1710 KHz (inclusive USA)
- Shortwave 5850-6250 KHz - 49 meter band
- AM double super concept
- AM IF1 10.7MHz
- AM IF2 450KHz
- First VCO frequency above input signal frequency
- Second X-tal oscillator frequency below IF1
- Usable sensitivity $\alpha 26\text{dB MW} = 14\mu\text{V typ.}$

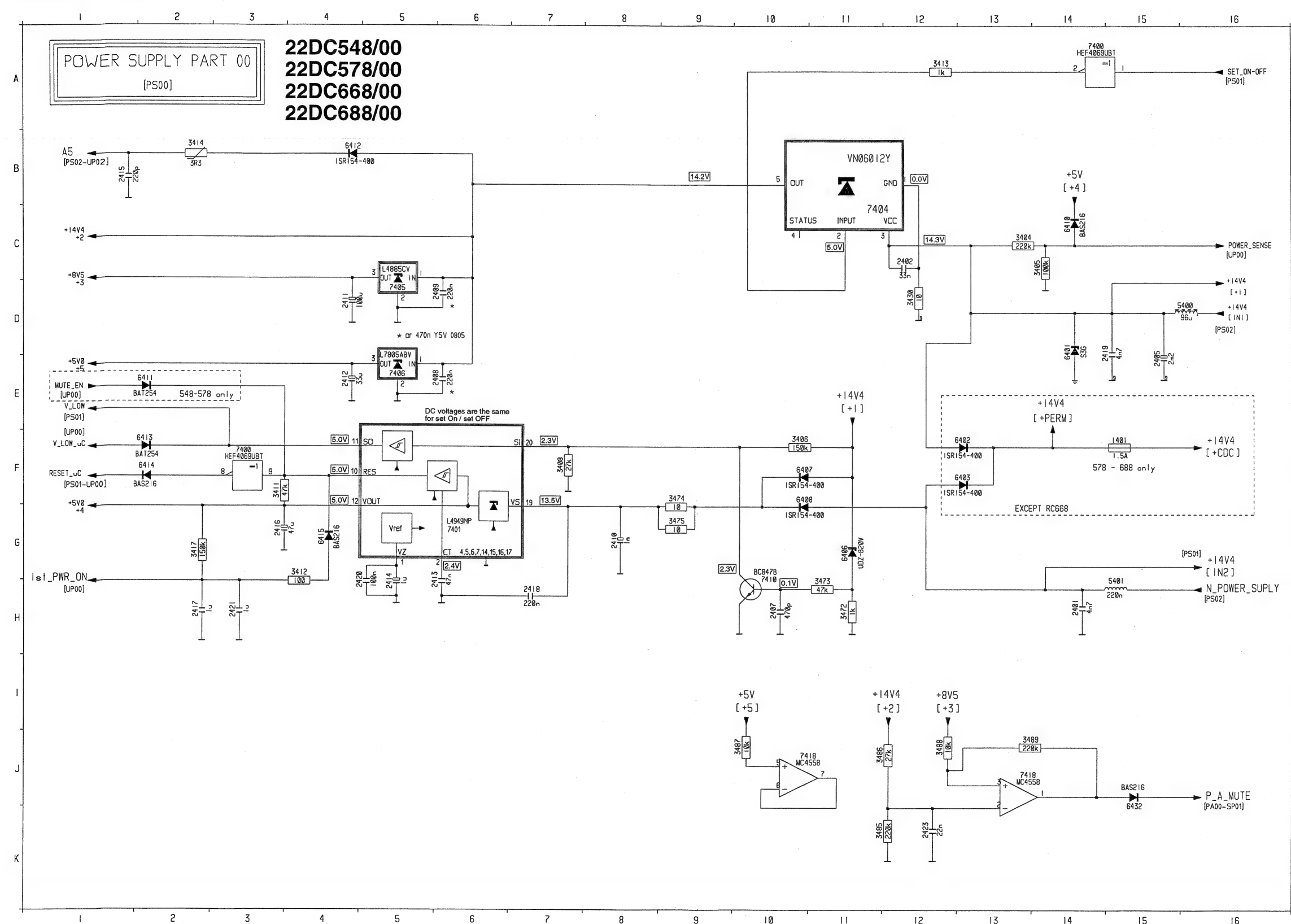
1) FM part

- FM 87.5 - 108MHz
- FM double super concept
- FM IF1 72.2MHz
- FM IF2 10.7MHz
- First VCO frequency above input signal frequency
- Second X-tal oscillator frequency below IF1
- Usable sensitivity $\alpha 26\text{dB} = 2.5\mu\text{V typ.}$
- THD 1mV $\delta f = 75\text{KHz} = 0.5\% \text{ typ}$
- Signal to noise ratio = 65dB typ
- Locktime synthesizer <2mSec



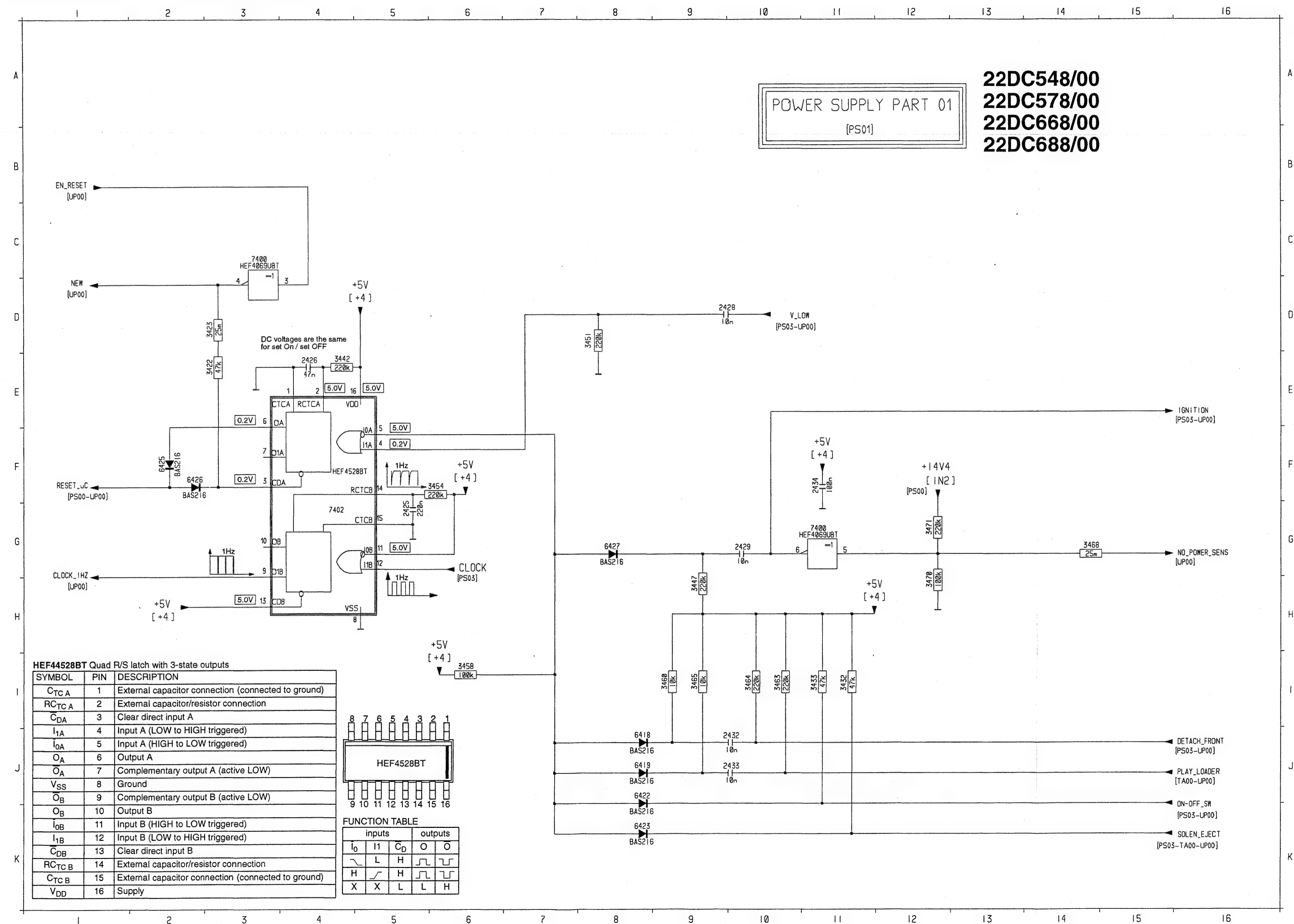
1st_PWR_ONG1
 A4H16
 A5B1
 MUTE_ENABLEE1
 POWER_SENSEC16
 P_A_MUTEK14

RESET_ucF1
 SET_ON-OFFA16
 V_LOWE1
 V_LOW_ucF1



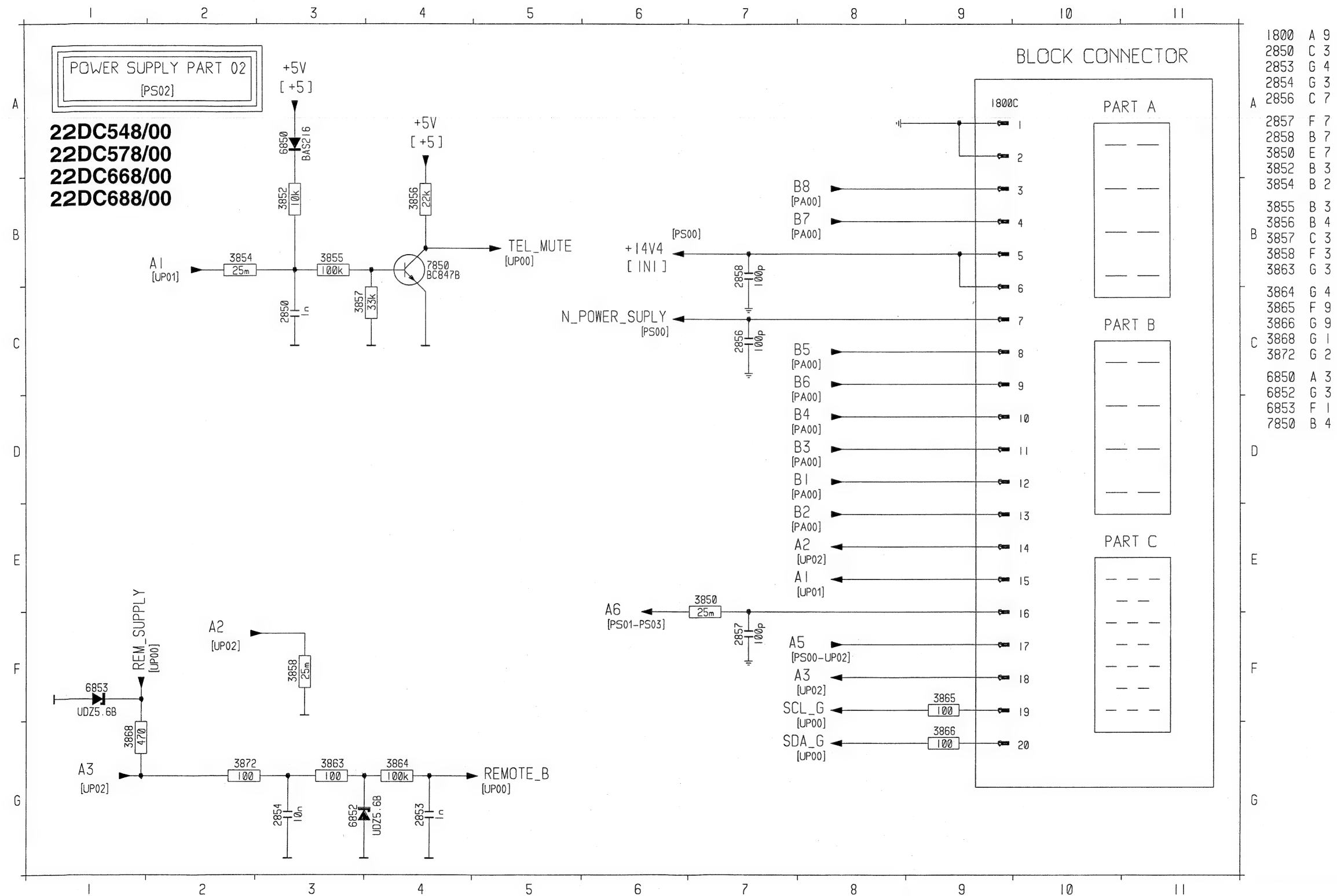
1401 F15
 2401 H14
 2402 C12
 2405 E15
 2407 H10
 2408 E 6
 2409 D 6
 2410 G 8
 2411 D 4
 2412 E 4
 2413 H 6
 2414 H 5
 2415 B 1
 2416 G 3
 2417 H 2
 2418 H 7
 2419 D15
 2420 H 5
 2421 H 3
 2423 K12
 3404 C13
 3405 C14
 3406 F10
 3408 F 7
 3411 F 3
 3412 G 4
 3413 A12
 3414 B 2
 3417 G 2
 3430 D12
 3472 H11
 3473 H11
 3474 F 9
 3475 G 9
 3485 K11
 3486 J11
 3487 J10
 3488 J12
 3489 J13
 5400 D16
 5401 H15
 6401 D14
 6402 F13
 6403 F13
 6406 G11
 6407 F10
 6408 F10
 6410 C14
 6411 E 2
 6412 B 4
 6413 F 2
 6414 F 2
 6415 G 4
 6432 K15
 7400 A14
 7400 F 3
 7401 G 6
 7404 C12
 7405 D 5
 7406 E 5
 7410 H10
 7418 J13
 7418 J11

CLOCKG6
 CLOCK_1HZG1
 DETACH_FRONTJ15
 EN_RESETB1
 IGNITIONE15
 NEWD1
 NO_POWER_SENSG15
 ON_OFF_SWJ15
 PLAY_LOADER.....J15
 RESET_uCF1
 SOLEN_EJECT.....K15
 V_LOWD10

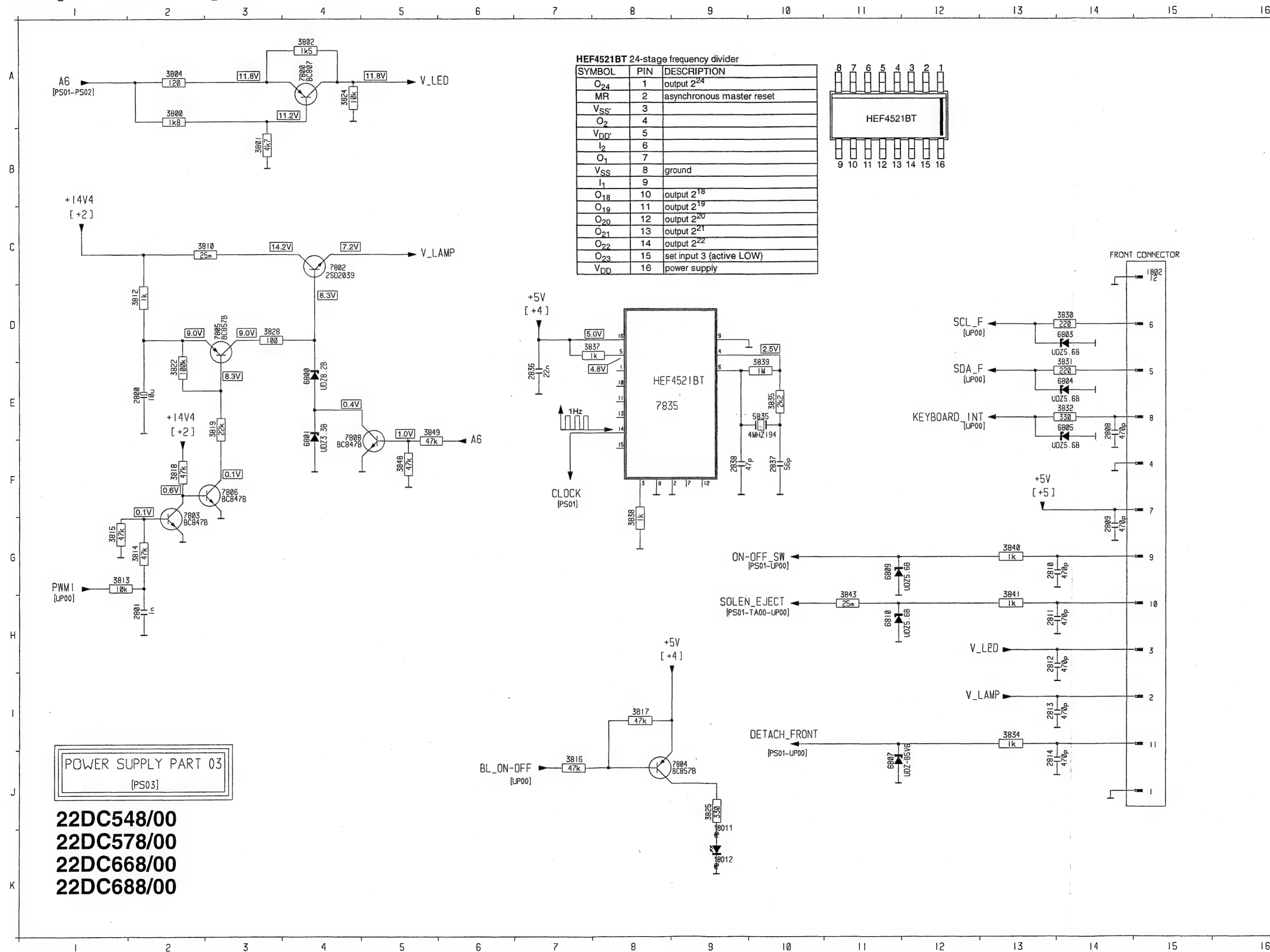


2425 G 5
 2426 E 4
 2428 D 9
 2429 G10
 2432 J10
 2433 J10
 2434 F11
 3422 E 3
 3423 D 3
 3432 I11
 3433 I11
 3442 E 4
 3447 H 9
 3451 D 8
 3454 F 6
 3458 I 6
 3460 I 9
 3463 I10
 3464 I10
 3465 I 9
 3468 G14
 3470 H12
 3471 G12
 6418 J 8
 6419 J 8
 6422 J 8
 6423 K 8
 6425 F 2
 6426 F 2
 6427 G 9
 7400 C 3
 7400 G11
 7402 G 4

A1	B2/E7	B2	E8	B8	B8	TEL_MUTE	B5
A2	F7/E2	B3	D8	N_POWER_SUPPLY	C6		
A3	F7/G1	B4	D8	REMOTE_B	G5		
A5	F8	B5	C8	REM_SUPPLY	F1		
A6	F6	B6	C8	SCL_G	F8		
B1	D8	B7	B8	SDA_G	G8		

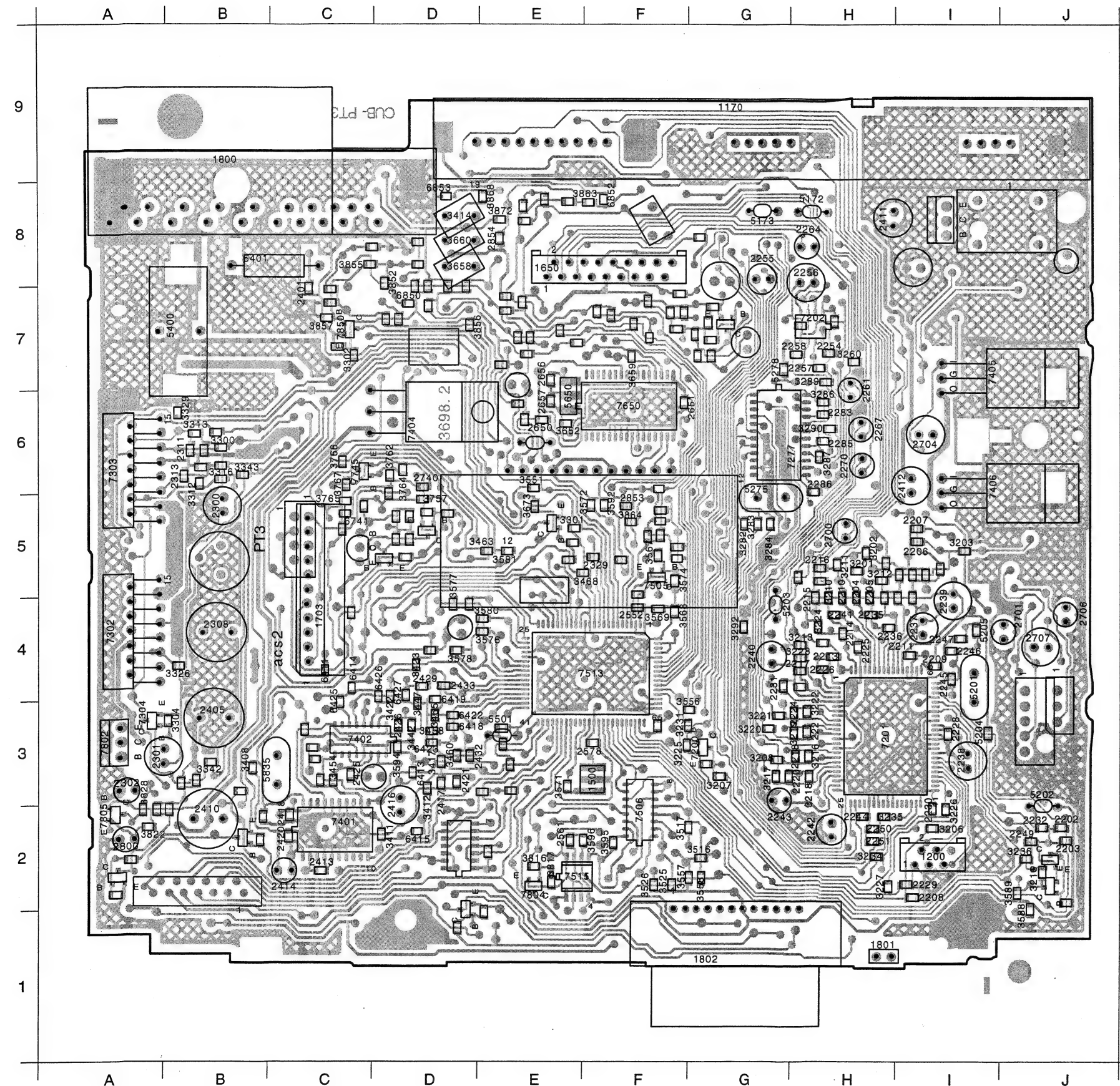


A6A1/E6 PWM1G1
 BL_ON-OFFJ6 SCL_FD13
 CLOCKF7 SDA_FE13
 DETACH_FRONTI10 SOLEN_EJECTG10
 KEYBOARD_INTE12 V_LAMPC5/I13
 ON-OFF_SWG10 V_LEDA5/H13

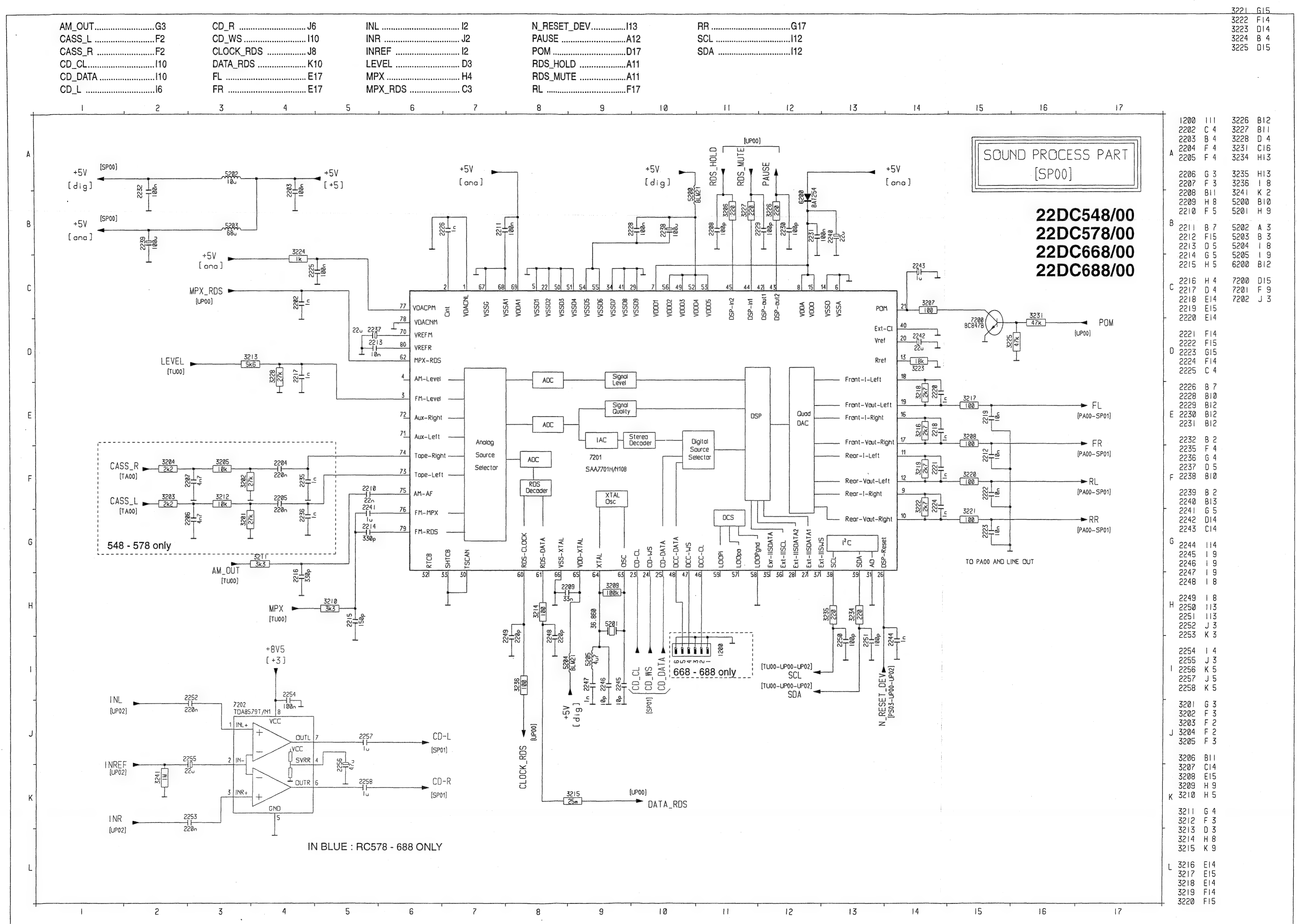


1801 K 9
 1802 C15
 2800 E 2
 2801 H 2
 2808 E14
 2809 G14
 2810 G13
 2811 H13
 2812 H13
 2813 I13
 2814 J13
 2836 E 7
 2837 F10
 2838 F 9
 3800 A 2
 3801 B 3
 3802 A 4
 3804 A 2
 3810 C 3
 3812 D 2
 3813 G 1
 3814 G 2
 3815 G 1
 3816 J 7
 3817 I 8
 3818 F 2
 3819 E 3
 3822 E 2
 3824 A 4
 3825 J 9
 3828 D 3
 3830 D14
 3831 E14
 3832 E14
 3834 I13
 3835 E10
 3837 D 7
 3838 G 8
 3839 E10
 3840 G13
 3841 H13
 3843 H11
 3848 F 5
 3849 E 5
 5835 E10
 6800 E 4
 6801 E 4
 6803 D14
 6804 E14
 6805 E14
 6807 J11
 6809 G11
 6810 H11
 7800 A 4
 7802 C 4
 7803 G 2
 7804 J 9
 7805 D 3
 7806 F 3
 7808 F 4
 7835 E 8

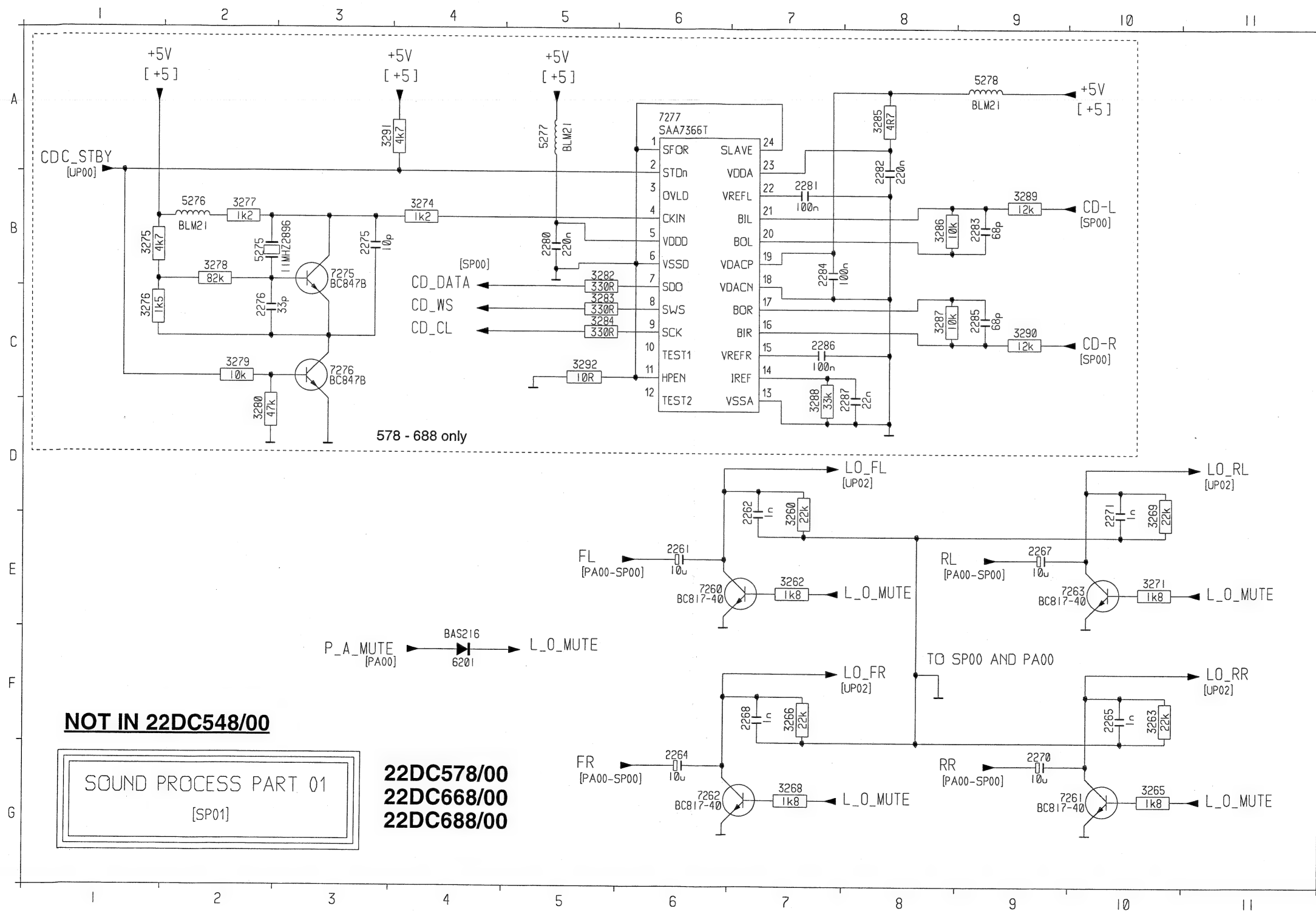
22RC548/00
22RC578/00
22RC668/00
22RC688/00



1170	G	8	2417	D	2	3422	D	3	6419	D	3
1200	I	1	2418	C	2	3423	D	3	6422	D	3
1500	F	2	2420	C	2	3442	D	3	6423	D	7
1650	F	7	2421	D	2	3447	D	3	6425	C	3
1703	C	4	2425	C	2	3454	C	2	6426	D	3
1800	B	8	2426	D	3	3458	D	3	6427	D	3
1801	H	1	2429	D	3	3460	D	2	6741	C	5
1802	G	1	2432	D	2	3463	E	4	6850	D	7
2202	J	2	2433	D	3	3465	D	3	6852	F	8
2203	J	1	2552	F	4	3468	E	4	6853	D	8
2204	H	4	2561	E	1	3516	G	1	7200	G	2
2205	H	4	2578	F	2	3517	F	2	7201	H	2
2206	I	4	2650	E	6	3525	F	1	7202	H	6
2207	I	4	2651	F	6	3526	F	1	7277	G	5
2208	I	1	2656	E	6	3551	E	5	7302	A	4
2209	I	3	2657	E	6	3556	F	3	7303	A	5
2210	H	4	2700	H	4	3557	G	1	7304	A	3
2211	I	3	2701	J	4	3558	G	1	7401	C	2
2213	H	3	2704	I	5	3567	F	4	7402	C	2
2214	H	3	2706	J	4	3568	F	4	7404	D	6
2215	H	4	2707	J	3	3569	F	4	7405	I	6
2216	H	4	2740	D	5	3571	E	2	7406	I	5
2217	H	3	2800	A	2	3572	F	5	7505	F	4
2218	H	2	2853	F	5	3574	F	4	7506	F	2
2220	G	2	2854	E	7	3576	E	3	7511	E	1
2221	H	3	3201	H	4	3577	D	4	7513	F	3
2224	H	3	3202	H	4	3578	D	3	7515	E	1
2225	H	3	3203	I	4	3580	E	4	7650	F	6
2226	H	3	3206	I	2	3581	E	4	7745	C	5
2228	I	3	3207	G	2	3588	J	1	7802	A	2
2229	I	1	3208	G	2	3589	J	1	7804	E	1
2230	I	2	3210	H	4	3592	F	5	7805	A	2
2231	G	3	3211	H	4	3594	D	2	7850	C	6
2232	J	2	3212	H	4	3595	F	1			
2235	H	4	3213	H	3	3596	E	1			
2236	H	4	3215	J	1	3652	E	6			
2237	I	4	3216	H	2	3658	D	7			
2238	I	2	3217	G	2	3659	F	7			
2239	I	4	3218	H	2	3660	D	6			
2240	G	3	3219	H	3	3673	E	5			
2241	H	4	3220	G	3	3757	D	5			
2242	H	2	3221	G	3	3762	D	5			
2243	G	2	3222	H	3	3764	D	5			
2244	H	2	3224	H	4	3765	C	5			
2245	I	3	3225	F	2	3766	C	5			
2246	I	3	3226	I	2	3767	C	5			
2247	I	3	3227	H	1	3816	E	1			
2249	J	1	3228	H	3	3817	E	1			
2250	H	2	3231	F	3	3822	A	2			
2251	H	1	3234	H	1	3828	A	2			
2254	H	6	3235	H	2	3852	D	7			
2255	G	7	3236	J	1	3855	C	7			
2256	H	7	3260	H	6	3856	D	6			
2257	H	6	3282	G	5	3857	C	7			
2258	H	6	3283	G	5	3863	F	8			
2261	H	6	3284	G	5	3864	F	8			
2264	H	7	3286	H	6	3868	E	5			
2267	H	5	3287	H	5	3872	E	7			
2270	H	5	3289	H	6	5172	H	8			
2283	H	6	3290	H	5	5173	G	8			
2285	H	5	3292	G	4	5201	I	3			
2286	H	5	3300	B	5	5202	J	2			
2300	B	5	3301	E	4	5203	G	4			
2301	A	2	3302	C	6	5204	I	3			
2302	A	2	3304	B	3	5205	I	4			
2308	B	3	3312	B	5	5275	G	5			
2311	B	5	3313	B	5	5278	G	6			
2313	B	5	3316	B	5	5400	B	6			
2329	F	4	3326	B	3	5401	C	7			
2401	C	7	3329	B	6	5501	E	3			
2405	B	3	3342	B	2	5650	E	6			
2410	B	2	3343	B	5	5835	C	2			
2411	H	7	3408	B	2	6411	C	3			
2412	I	5	3411	D	2	6413	D	2			
2413	C	1	3412	D	2	6414	C	3			
2414	C	1	3414	D	8	6415	D	2			
2416	D	2	3417	D	2	6418	D	3			

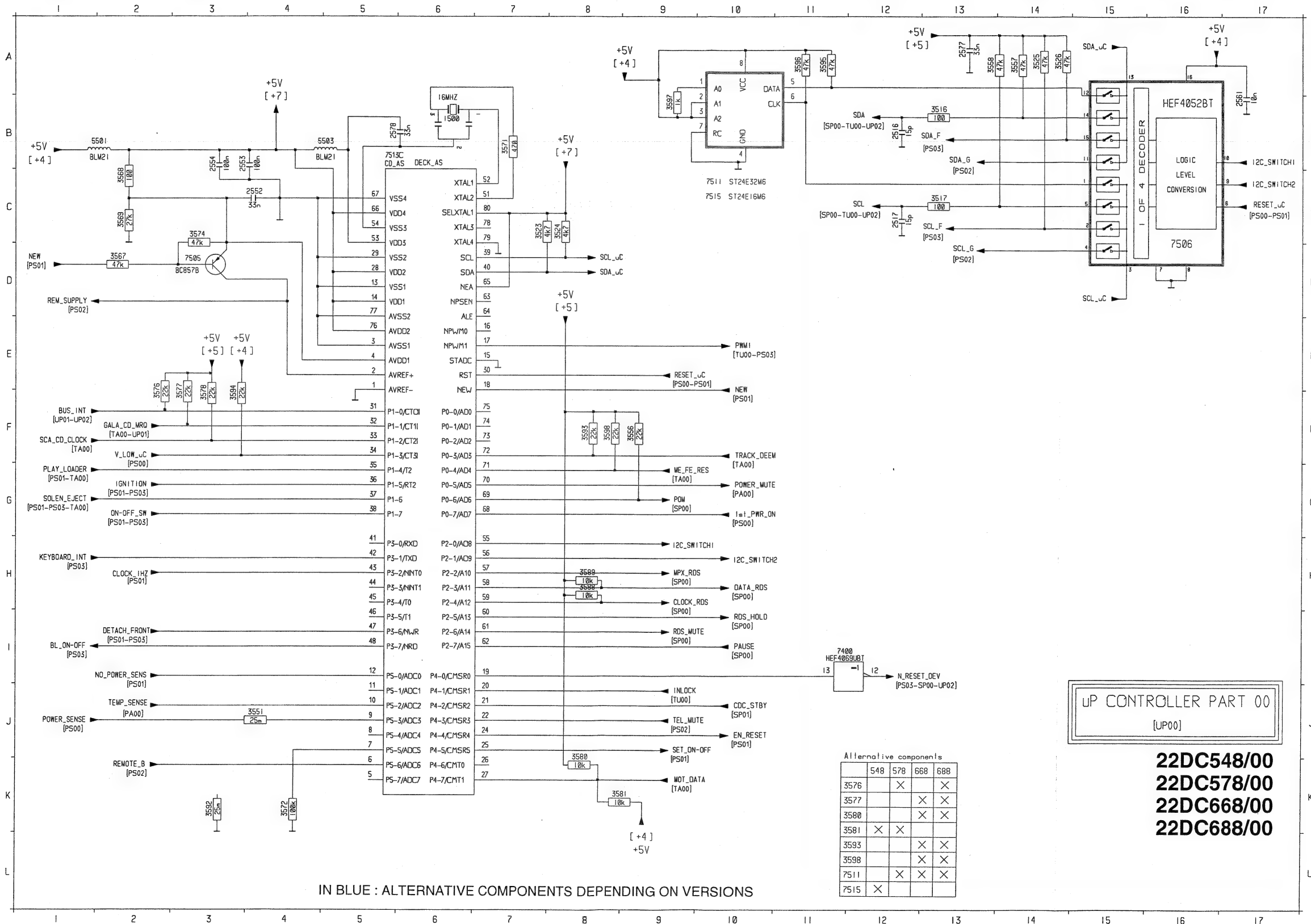


CD-RC10	FRG6	L_O_MUTEE11/G11
CD-LB10	LO_FLD7	P_A_MUTEF4
CD_CLC4	LO_FRF7	RLE9
CD_DATAB4	LO_RLD11	RRG9
CD_WSC4	LO_RRF11	
CDC_STBYA1	L_O_MUTEF5	
FLE6	L_O_MUTEE7/G7	



2261	E 6	5276	B 2
2262	D 7	5277	A 5
2264	G 6	5278	A 9
2265	F10	6201	F 4
2267	E 9	7260	E 6
2268	F 7	7261	G10
2270	G 9	7262	G 6
2271	D10	7263	E10
2275	B 3	7275	B 3
2276	C 2	7276	C 3
2280	B 5	7277	A 6
2281	B 7		
2282	A 8		
2283	B 9		
2284	B 7		
2285	C 9		
2286	C 7		
2287	C 8		
3260	D 7		
3262	E 7		
3263	F10		
3265	G10		
3266	F 7		
3268	G 7		
3269	D10		
3271	E10		
3274	B 4		
3275	B 1		
3276	C 1		
3277	B 2		
3278	B 2		
3279	C 2		
3280	D 2		
3282	B 5		
3283	C 5		
3284	C 5		
3285	A 8		
3286	B 8		
3287	C 8		
3288	C 7		
3289	B 9		
3290	C 9		
3291	A 3		
3292	C 5		
5275	B 2		

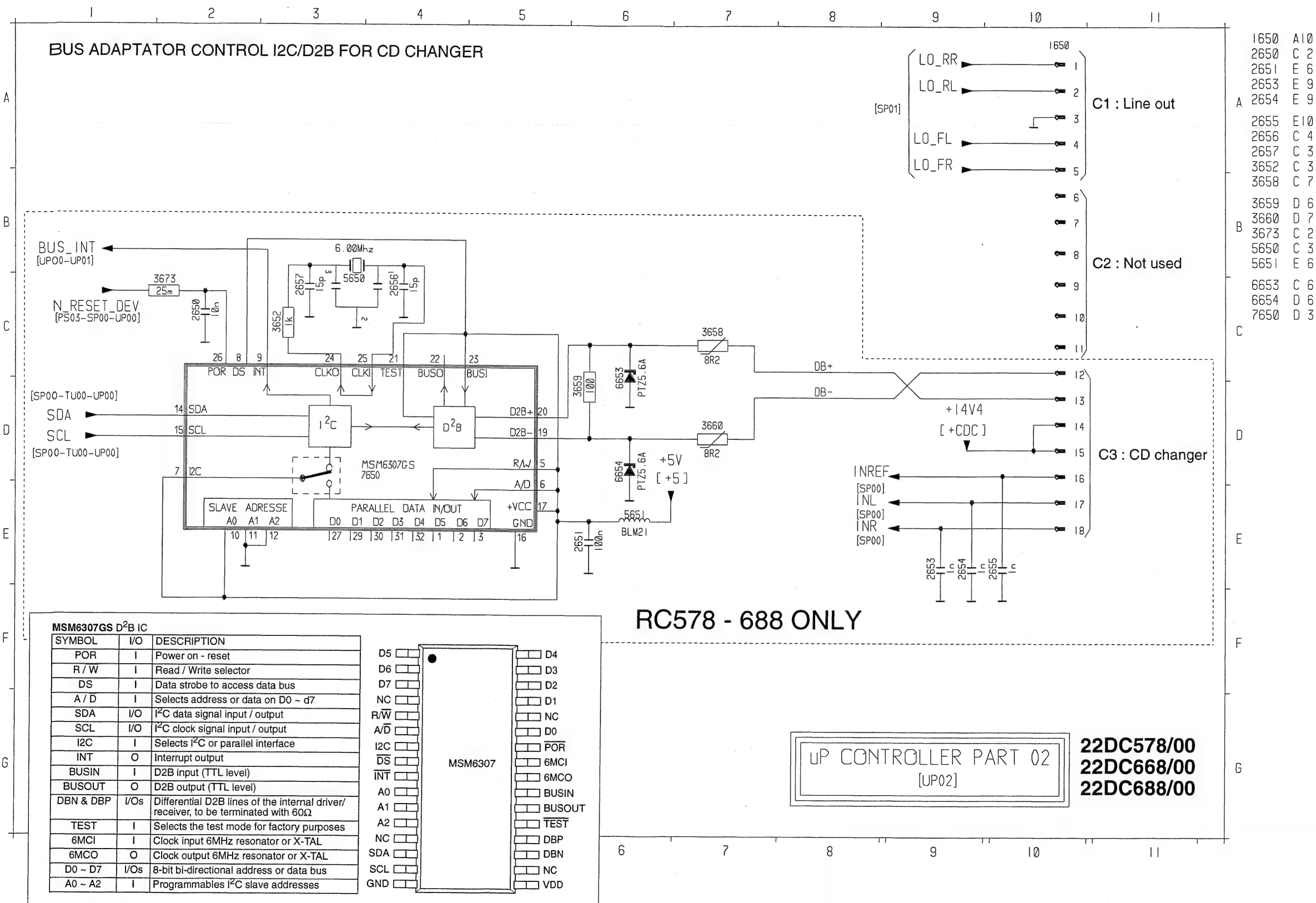
1st_PWR_ON.....G10	DATA_RDS.....H10	IGNITION.....G2	NEW.....D1/E10	POM.....G9	REMOTE_B.....K2	SCL_G.....D13	SET_ON-OFF.....J9
BL_ON-OFF.....I1	DETACH_FRONT.....I2	INLOCK.....J9	NO_POWER_SENS.....I2	POWER_MUTE.....G10	REM_SUPPLY.....D1	SCL_uC.....D8/D15	SOLENEJECT.....G1
BUS_INT.....F1	EN_RESET.....J10	KEYBOARD_INT.....H1	N_RESET_DEV.....I12	POWER_SENS.....J1	RESET_uC.....E9/C17	SDA.....B12	TEL_MUTE.....J9
CDC_STBY.....J10	GALA_CD_MRQ.....F2	ME_FE_RES.....G9	ON-OFF_SW.....G2	PWM1.....E10	SCA_CD_CLOCK.....F1	SDA_F.....B13	TEMP_SENSE.....J2
CLOCK_1HZ.....H2	I2C_SWITCH1.....H9/B17	MOX_RDS.....H9	PAUSE.....I10	RDS_HOLD.....I10	SCL.....C12	SDA_G.....B13	TRACK_DEEM.....F10
CLOCK_RDS.....H9	I2C_SWITCH2.....H10/C17	MOT_DATA.....K9	PLAY_LOADER.....G1	RDS_MUTE.....I9	SCL_F.....C13	SDA_uC.....D8/A15	V_LOW_uC.....F2



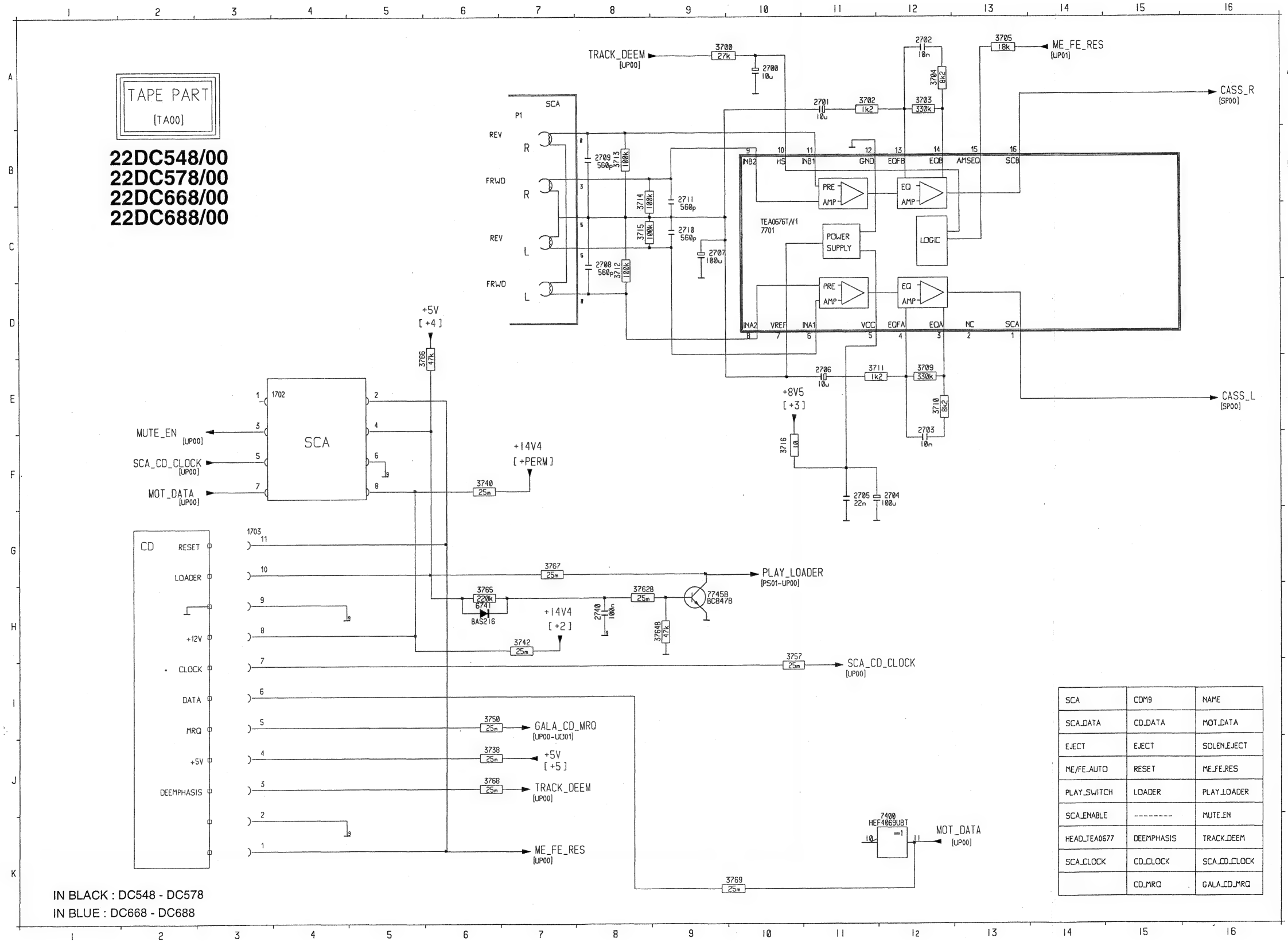
UP CONTROLLER PART 00
[UP00]

22DC548/00
22DC578/00
22DC668/00
22DC688/00

INL.....E9 LO_RR.....A9
 INR.....E9 MRQ_D2B.....B1
 INREF_BCL.....D9 RESET_DEV.....B1
 LO_FL.....A9 SCL.....D1
 LO_FR.....A9 SDA.....D1
 LO_RL.....A9



CASS_L E16
 CASS_R A16
 GALA_CD_MRQ I7
 ME_FE_RES A14/K7
 MUTE_EN E3
 PLAY_LOADER G10
 SCA_CD_CLOCK F3/I11
 MOT_DATA F3/K12
 TRACK_DEEM A8/J7

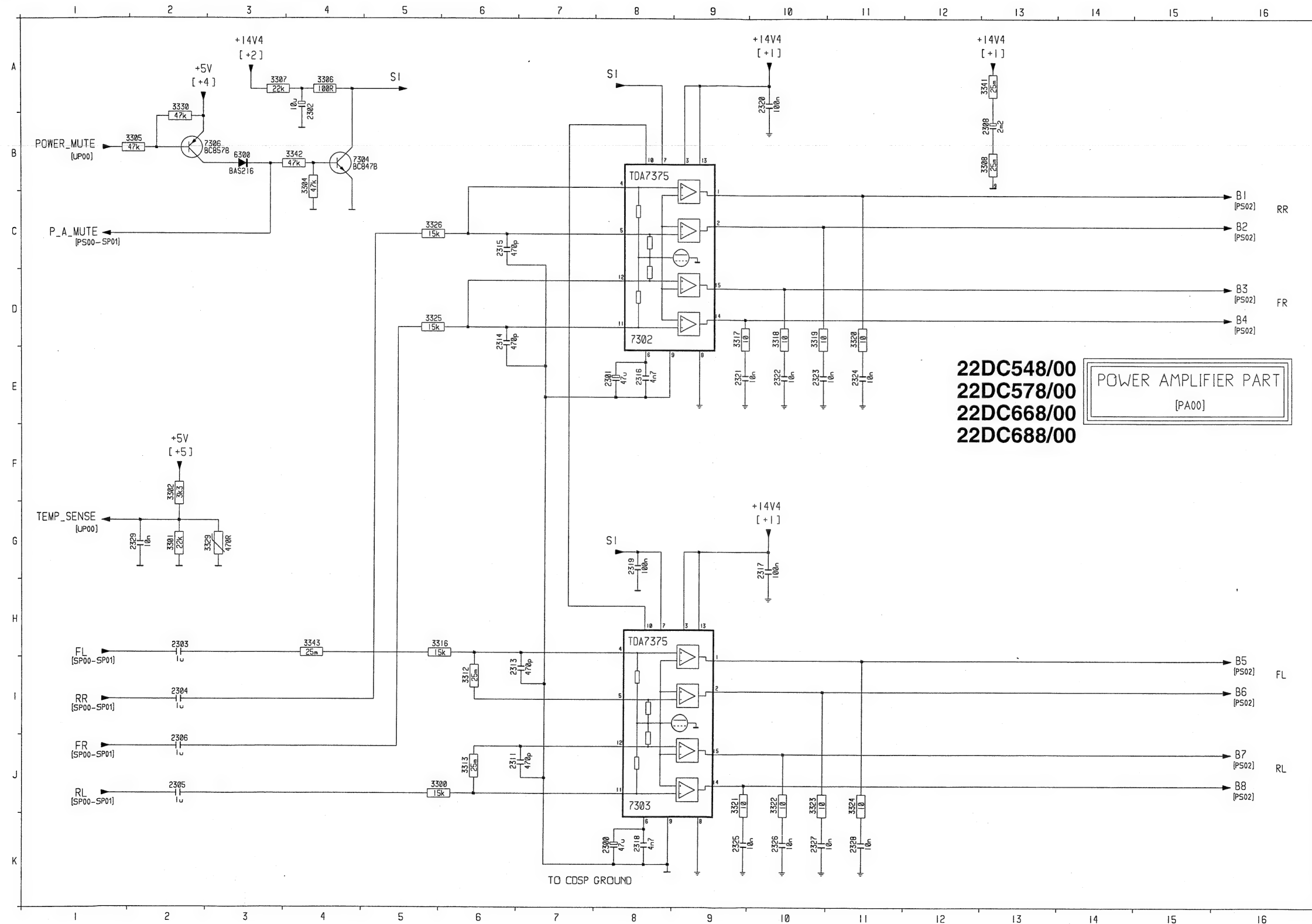


1702 E 3
 1703 G 3
 2700 A10
 2701 A11
 2702 A12
 2703 F12
 2704 F12
 2705 F11
 2706 E11
 2707 C 9
 2708 C 8
 2709 B 8
 2710 C 9
 2711 B 9
 2740 H 8
 3700 A 9
 3702 A11
 3703 A12
 3704 A12
 3705 A13
 3709 E12
 3710 E12
 3711 E11
 3712 C 8
 3713 B 8
 3714 B 8
 3715 C 8
 3716 F10
 3738 J 6
 3740 F 6
 3742 H 7
 3750 I 6
 3757 H10
 3762B H 8
 3764B H 9
 3765 H 6
 3766 E 5
 3767 G 7
 3768 J 6
 3769 K10
 6741 H 6
 7400 K12
 7701 C10
 7745B H 9

SCA	CDM9	NAME
SCA.DATA	CD.DATA	MOT.DATA
EJECT	EJECT	SOLENEJECT
ME/FE.AUTO	RESET	ME_FE.RES
PLAY_SWITCH	LOADER	PLAY_LOADER
SCA.ENABLE	-----	MUTE.EN
HEAD.TEA0677	DEEMPHASIS	TRACK.DEEM
SCA.CLOCK	CD.CLOCK	SCA_CD_CLOCK
	CD.MRQ	GALA_CD_MRQ

IN BLACK : DC548 - DC578
 IN BLUE : DC668 - DC688

B1C16	B7J16	RLJ1
B2C16	B8J16	RRI1
B3D16	FLH1	SIA5-A8-G8
B4D16	FRJ1	TEMP_SENSEG1
B5I16	PA_MUTEC1	
B6I16	POWER_MUTEB1	



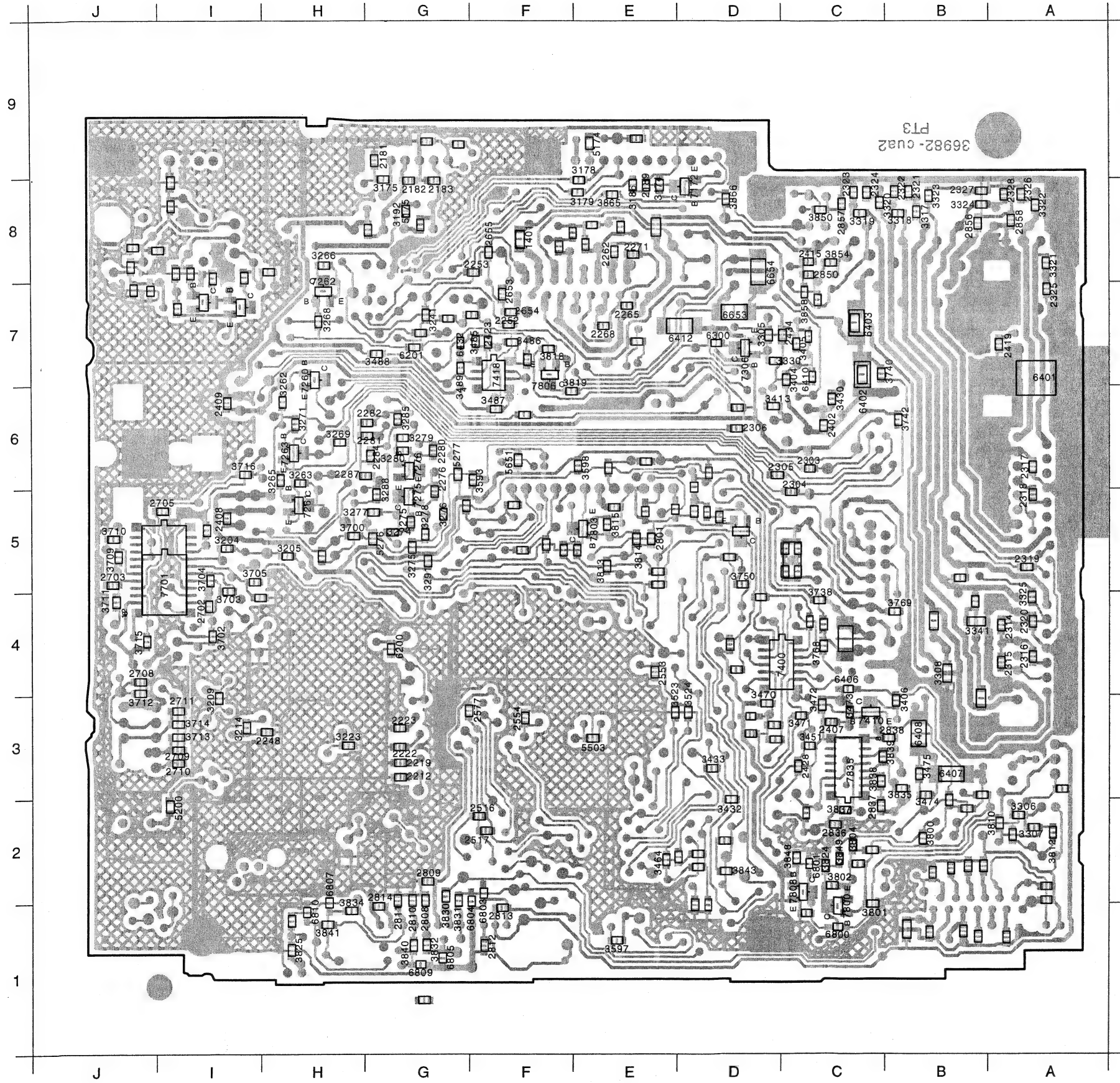
2300	K 8
2301	E 8
2302	A 4
2303	H 2
2304	I 2
2305	J 2
2306	J 2
2308	B13
2311	J 6
2313	I 6
2314	D 6
2315	C 6
2316	E 8
2317	G10
2318	K 8
2319	G 8
2320	A10
2321	E 9
2322	E10
2323	E10
2324	E11
2325	K 9
2326	K10
2327	K10
2328	K11
2329	G 2
3300	J 6
3301	G 2
3302	F 2
3304	B 4
3305	B 2
3306	A 4
3307	A 3
3308	B13
3312	I 6
3313	J 6
3316	H 6
3317	O 9
3318	D10
3319	D10
3320	D11
3321	J 9
3322	J10
3323	J10
3324	J11
3325	D 5
3326	C 5
3329	G 3
3330	A 2
3341	A13
3342	B 4
3343	H 4
6300	B 3
7302	D 8
7303	J 8
7304	B 4
7306	B 2

22DC548/00
22DC578/00
22DC668/00
22DC688/00

POWER AMPLIFIER PART
[PA00]


MAIN PWB LAYOUT. BOTTOM SIDE VIEW



22RC548/00
22RC578/00
22RC668/00
22RC688/00



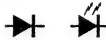
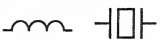



1401 F 7	2850 C 7	3705 I 4	7261 H 5
2181 H 8	2856 B 8	3709 J 4	7262 H 7
2182 G 8	2857 C 8	3710 J 5	7263 H 5
2183 G 8	2858 B 8	3711 J 4	7275 G 5
2189 E 8	3174 E 8	3712 J 3	7276 G 5
2212 G 2	3175 H 8	3713 J 3	7306 D 6
2219 G 2	3178 F 8	3714 J 3	7400 D 3
2222 G 3	3179 F 8	3715 J 4	7410 C 3
2223 G 3	3186 E 8	3716 I 5	7418 F 6
2248 I 3	3192 G 8	3738 C 4	7701 J 4
2252 F 7	3204 I 4	3740 C 6	7800 C 1
2253 G 7	3205 H 4	3742 C 6	7803 F 5
2262 E 7	3209 I 3	3750 D 4	7806 F 6
2265 E 7	3214 I 3	3768 C 4	7808 D 1
2268 E 7	3223 H 3	3769 C 4	7835 C 2
2271 E 7	3241 G 7	3800 B 2	
2275 G 5	3262 I 6	3801 C 1	
2276 G 5	3263 H 5	3802 C 1	
2280 G 5	3265 I 5	3804 C 2	
2281 H 6	3266 H 7	3810 B 2	
2282 H 6	3268 H 7	3812 A 2	
2284 H 5	3269 H 6	3813 E 4	
2287 H 5	3271 H 6	3814 E 5	
2303 C 5	3274 G 5	3815 E 5	
2304 D 5	3275 G 4	3818 F 6	
2305 D 5	3276 G 5	3819 F 6	
2306 D 6	3277 H 5	3824 C 1	
2314 B 4	3278 G 5	3825 H 1	
2315 B 3	3279 G 6	3830 G 1	
2316 A 3	3280 G 5	3831 G 1	
2317 A 5	3285 G 6	3832 G 1	
2318 A 5	3288 H 5	3834 H 1	
2319 A 4	3291 G 4	3835 C 2	
2320 A 4	3305 D 7	3837 C 2	
2321 B 8	3306 A 2	3838 C 2	
2322 C 8	3307 A 2	3839 C 2	
2323 C 8	3308 B 3	3840 G 1	
2324 C 8	3317 B 8	3841 H 1	
2325 A 7	3318 C 8	3843 D 1	
2326 A 8	3319 C 8	3848 D 1	
2327 B 8	3320 C 8	3849 C 1	
2328 B 8	3321 A 7	3850 C 8	
2402 C 6	3322 A 8	3854 C 7	
2407 C 3	3323 B 8	3858 C 7	
2408 I 5	3324 B 8	3865 E 8	
2409 I 6	3325 A 4	3866 D 8	
2415 C 7	3330 D 6	5174 F 8	
2419 B 6	3341 B 4	5175 G 8	
2423 G 6	3404 D 6	5200 J 2	
2428 D 2	3405 D 6	5276 H 5	
2434 D 7	3406 C 3	5277 G 5	
2516 G 2	3413 D 6	5503 F 3	
2517 G 2	3430 C 6	5651 F 5	
2553 E 3	3432 D 2	6200 G 3	
2554 F 3	3433 D 2	6201 G 6	
2577 G 3	3451 C 3	6300 D 6	
2653 F 7	3464 E 1	6401 A 6	
2654 F 7	3470 D 3	6402 C 6	
2655 G 7	3471 D 3	6403 C 7	
2702 I 4	3472 C 3	6406 C 3	
2703 J 4	3473 C 3	6407 B 2	
2705 J 5	3474 B 2	6408 B 3	
2708 J 3	3475 B 2	6410 C 6	
2709 J 3	3485 G 6	6412 E 7	
2710 J 2	3486 F 6	6432 G 6	
2711 J 3	3487 F 6	6653 D 7	
2801 E 5	3488 H 6	6654 D 7	
2808 G 1	3489 G 6	6800 C 1	
2809 G 1	3523 E 3	6801 C 1	
2810 G 1	3524 E 3	6803 G 1	
2811 G 1	3593 G 5	6804 G 1	
2812 G 1	3597 E 1	6805 G 1	
2813 F 1	3598 F 5	6807 H 1	
2814 H 1	3700 H 5	6809 G 1	
2836 C 2	3702 I 4	6810 H 1	
2837 C 2	3703 I 4	7172 E 8	
2838 C 3	3704 I 4	7260 H 6	

Miscellaneous			-II-		
1000	4822 691 1 0366		2255	4822 124 23279	22μF 20% 16V
1170	4822 210 1 0721	TUNER	2256	4822 124 22646	47μF 20%
1500	4822 242 1 0564	CSTCS16.00MX040-TC	2257	4822 126 14043	1μF +80- 20% 16V
-II-			2258	4822 126 14043	1μF +80- 20% 16V
2181	5322 122 32531	100pF 5% 0805 NPO	2261	4822 124 41017	10μF 16V
2182	5322 122 32654	22nF 10% X7R 63V	2262	5322 122 34123	1nF 10% X7R 50V
2183	5322 122 32654	22nF 10% X7R 63V	2264	4822 124 41017	10μF 16V
2189	4822 126 13196	100N 10% 0805 X7R	2265	5322 122 34123	1nF 10% X7R 50V
2200	4822 126 13196	100nF 10% X7R 25V	2267	4822 124 41017	10μF 16V
			2268	5322 122 34123	1nF 10% X7R 50V
2202	5322 122 34123	1nF 10% X7R 50V	2270	4822 124 41017	10μF 16V
2203	4822 126 13196	100N 10% 0805 X7R	2271	5322 122 34123	1nF 10% X7R 50V
2204	4822 126 13849	220N 16V 10% 0805 X7R	2275	5322 122 32448	10pF 5% 0805
2205	4822 126 13849	220N 16V 10% 0805 X7R	2276	5322 122 32659	33pF 5% 0805
2206	5322 126 10223	4n7 10% X7R 0805	2280	4822 126 13849	220N 16V 10% 0805 X7R
2207	5322 126 10223	4n7 10% X7R 0805	2281	4822 126 13196	100nF 10% X7R 25V
2208	5322 122 32531	100pF 5%NPO 50V	2282	4822 126 13849	220N 16V 10% 0805 X7R
2209	4822 122 33342	33nF 10% X7R 63V	2283	4822 122 33514	68pF 5% 0805
2210	5322 122 32654	22N 10% 0805 X7R	2284	4822 126 13196	100nF 10% X7R 25V
2211	4822 126 13196	100nF 10% X7R 25V	2285	4822 122 33514	68pF 5% 0805
2212	5322 122 34098	10nF 10% X7R 63V	2286	4822 126 13196	100nF 10% X7R 25V
2213	5322 122 34098	10nF 10% X7R 63V	2287	5322 122 32654	22N 10% 0805 X7R
2214	5322 122 31863	330pF 5%NPO 50V	2300	4822 124 22646	47U 16V 20%
2215	5322 122 33538	150pF 2%NPO 63V	2301	4822 124 22646	47U 16V 20%
2216	5322 122 31863	330pF 5%NPO 50V	2302	4822 124 41017	10μF 16V
2217	5322 122 34123	1nF 10% X7R 50V	2303	4822 126 14043	1μF +80- 20% 16V
2218	5322 122 34123	1nF 10% X7R 50V	2304	4822 126 14043	1μF +80- 20% 16V
2219	5322 122 34098	10nF 10% X7R 63V	2305	4822 126 14043	1μF +80- 20% 16V
2220	5322 122 34123	1nF 10% X7R 50V	2306	4822 126 14043	1μF +80- 20% 16V
2221	5322 122 34123	1nF 10% X7R 50V	2308	4822 124 80769	2200μF 20% 16V
2222	5322 122 34098	10nF 10% X7R 63V	2311	5322 122 32268	470pF 5% 0805 NPO
2223	5322 122 34098	10nF 10% X7R 63V	2313	5322 122 32268	470pF 10% 50V
2224	5322 122 34123	1nF 10% X7R 50V	2314	5322 122 32268	470pF 10% 50V
2225	4822 126 13196	100nF 10% X7R 25V	2315	5322 122 32268	470pF 10% 50V
2226	5322 122 34123	1nF 10% X7R 50V	2316	5322 126 10223	4,7nF 10% X7R 63V
2228	4822 126 13196	100nF 10% X7R 25V	2317	4822 126 13196	100nF 10% X7R 25V
2229	5322 122 32531	100pF 5% NPO 50V	2318	5322 126 10223	4,7nF 10% X7R 63V
2230	5322 122 32531	100pF 5% NPO 50V	2319	4822 126 13196	100nF 10% X7R 25V
2231	4822 126 13196	100nF 10% X7R 25V	2320	4822 126 13196	100nF 10% X7R 25V
2232	4822 126 13196	100nF 10% X7R 25V	2321	5322 122 34098	10nF 10% X7R 63V
2235	5322 122 34123	1nF 10% X7R 50V	2322	5322 122 34098	10nF 10% X7R 63V
2236	5322 122 34123	1nF 10% X7R 50V	2323	5322 122 34098	10nF 10% X7R 63V
2237	4822 124 23279	22μF 20% 16V	2324	5322 122 34098	10nF 10% X7R 63V
2238	4822 124 80453	100μF 10V 20%	2325	5322 122 34098	10nF 10% X7R 63V
2239	4822 124 80453	100μF 20% 10V	2326	5322 122 34098	10nF 10% X7R 63V
2240	4822 124 23279	22μF 20% 16V	2327	5322 122 34098	10nF 10% X7R 63V
2241	4822 126 14043	1μF +80- 20% 16V	2328	5322 122 34098	10nF 10% X7R 63V
2242	4822 124 23279	22μF 20% 16V	2329	5322 122 34098	10nF 10% X7R 63V
2243	4822 124 23282	1μF 20% 50V	2401	5322 126 10223	4,7nF 10% X7R 63V
2244	5322 122 34123	1nF 10% X7R 50V	2402	4822 122 33342	33nF 10% X7R 63V
2245	5322 122 32448	10pF 5% 50V	2405	4822 124 80769	2200μF 20% 16V
2246	5322 122 32448	10pF 5% 50V	2407	5322 122 32268	470pF 10% 50V
2247	5322 122 34123	1nF 10% X7R 50V	2408	4822 126 13849	220nF 10% 16V
2248	4822 122 33575	220pF 5% NPO 50V	2409	4822 126 13849	220nF 10% 16V
2249	4822 122 33575	220pF 5% NPO 50V	2410	4822 124 80766	1000μF 20% 25V
2250	5322 122 32531	100pF 5% NPO 50V	2411	4822 124 80453	100μF 20% 10V
2251	5322 122 32531	100pF 5% NPO 50V	2412	4822 124 23281	33μF 20% 16V
2252	4822 126 13849	220N 16V 10% 0805 X7R	2413	4822 126 13343	47N 25V 10% 0805 X7R
2253	4822 126 13849	220N 16V 10% 0805 X7R	2414	4822 124 23282	1μF 20% 50V
2254	4822 126 13196	100nF 10% X7R 25V	2415	4822 122 33575	220pF 5%NPO 50V

-II-			-II-		
2416	4822 124 22646	47μF 16V 20%	2858	5322 122 32531	100pF 5%NPO 50V
2417	4822 126 14043	1μF +80- 20% 16V			
2418	4822 126 13849	220nF 10% 16V	3174	4822 051 20332	3K3 5% RST SM 0805
2419	5322 126 10223	4,7nF 10% X7R 63V	3175	4822 051 20102	1KΩ 5% 0,1W
2420	4822 126 13196	100nF 10% X7R 25V	3178	4822 051 20008	0Ω JUMP. (0805)
2421	4822 126 14043	1μF +80- 20% 16V	3179	4822 051 20008	0Ω JUMP. (0805)
2423	5322 122 32654	22nF 50V 10% 0805 X7R	3186	4822 117 11449	2K2 1% 0,1W
2425	4822 126 13849	220nF 16V 10% 0805 X7R			
2426	4822 126 13343	47nF 25V 10% 0805 X7R	3192	4822 051 20008	0Ω JUMP. (0805)
2428	5322 122 34098	10nF 10% X7R 63V	3201	4822 051 20273	27KΩ 5% SM 0805
2429	5322 122 34098	10nF 10% X7R 63V	3202	4822 051 20273	27KΩ 5% SM 0805
2432	5322 122 34098	10nF 10% X7R 63V	3203	4822 117 11449	2K2 1% 0,1W
2433	5322 122 34098	10nF 10% X7R 63V	3204	4822 117 11449	2K2 1% 0,1W
2434	4822 126 13196	100nF 25V 10% 0805 X7R			
2516	5322 122 33869	15pF 5%NPO 63V	3205	4822 117 10833	10KΩ 1% 0,1W
2517	5322 122 33869	15pF 5%NPO 63V	3206	4822 117 11503	220R 1% 0,1W
2552	4822 122 33342	33nF 50V 10% 0805 X7R	3207	4822 051 20101	100Ω 5% 0,1W
2553	4822 126 13196	100nF 25V 10% 0805 X7R	3208	4822 051 20101	100Ω 5% 0,1W
2554	4822 126 13196	100nF 25V 10% 0805 X7R	3209	4822 051 20104	100KΩ 5% 0,1W
2561	5322 122 34098	10nF 10% X7R 63V	3210	4822 051 20332	3K30 5% 0,1W
2577	4822 122 33342	33nF 10% X7R 63V	3211	4822 051 20332	3K30 5% 0,1W
2578	4822 122 33342	33nF 50V 10% 0805 X7R	3212	4822 117 10833	10KΩ 1% 0,1W
2650	5322 122 34098	10nF 10% X7R 63V	3213	4822 051 20562	5K60 5% 0,1W
2651	4822 126 13196	100nF 25V 10% 0805 X7R	3214	4822 051 20101	100Ω 5% 0,1W
2653	5322 122 34123	1nF 10% X7R 50V	3215	4822 051 20008	0Ω JUMP. (0805)
2654	5322 122 34123	1nF 10% X7R 50V	3216	4822 051 20272	2K70 5% 0,1W
2655	5322 122 34123	1nF 10% X7R 50V	3217	4822 051 20101	100Ω 5% 0,1W
2656	5322 122 33869	15pF 5%NPO 63V	3218	4822 051 20272	2K70 5% 0,1W
2657	5322 122 33869	15pF 5%NPO 63V	3219	4822 051 20272	2K70 5% 0,1W
2700	4822 124 41017	10μF 16V 20%	3220	4822 051 20101	100Ω 5% 0,1W
2701	4822 124 41017	10μF 16V 20%	3221	4822 051 20101	100Ω 5% 0,1W
2702	5322 122 34098	10nF 10% X7R 63V	3222	4822 051 20272	2K70 5% 0,1W
2703	5322 122 34098	10nF 10% X7R 63V	3223	4822 051 20183	18KΩ 5% 0,1W
2704	4822 124 80453	100μF 10V 20%	3224	4822 051 20102	1KΩ 5% 0,1W
2705	5322 122 32654	22nF 10% 0805 X7R	3225	4822 051 20473	47KΩ 5% RST SM 0805
2706	4822 124 41017	10μF 16V 20%	3226	4822 117 11503	220R 1% 0,1W
2707	4822 124 80453	100μF 10V 20%	3227	4822 117 11503	220R 1% 0,1W
2708	5322 116 80853	560pF 5% 0805 NPO	3228	4822 051 20273	27KΩ 5% 0,1W
2709	5322 116 80853	560pF 5% 0805 NPO	3231	4822 051 20473	47KΩ 5% RST SM 0805
2710	5322 116 80853	560pF 5% 0805 NPO	3234	4822 117 11503	220R 1% 0,1W
2711	5322 116 80853	560pF 5% 0805 NPO	3235	4822 117 11503	220R 1% 0,1W
2740	4822 126 13196	100nF 10% X7R 25V	3236	4822 051 20101	100Ω 5% 0,1W
2800	4822 124 41017	10μF 16V 20%	3241	4822 051 20105	1M00 5% 0,1W
2801	5322 122 34123	1N 50V 10% 0805 X7R	3260	4822 051 20223	22KΩ 5% 0,1W
2808	5322 122 32268	470pF 10% 50V	3262	4822 051 20182	1K80 5% 0,1W
2809	5322 122 32268	470pF 10% 50V	3263	4822 051 20223	22KΩ 5% 0,1W
2810	5322 122 32268	470pF 10% 50V	3265	4822 051 20182	1K80 5% 0,1W
2811	5322 122 32268	470pF 10% 50V	3266	4822 051 20223	22KΩ 5% 0,1W
2812	5322 122 32268	470pF 10% 50V	3268	4822 051 20182	1K80 5% 0,1W
2813	5322 122 32268	470pF 10% 50V	3269	4822 051 20223	22KΩ 5% 0,1W
2814	5322 122 32268	470pF 10% 50V	3271	4822 051 20182	1K80 5% 0,1W
2835	4822 122 33128	15nF 10% X7R 63V	3274	4822 051 20122	1k20 5% 0,1W
2836	5322 122 32654	22nF 10% X7R 63V	3275	4822 051 20472	4k7 5% 0,1W
2837	4822 126 13693	56pF 1% NPO 63V	3276	4822 117 11139	1k5 5% 0805
2838	5322 122 32452	47pF 5% NPO 63V	3277	4822 051 20122	1k20 5% 0,1W
2850	5322 122 34123	1nF 10% X7R 50V	3278	4822 117 11449	2K2 1% 0,1W
2853	5322 122 34123	1nF 10% X7R 50V	3279	4822 117 10833	10KΩ 1% 0,1W
2854	5322 122 34098	10nF 10% X7R 63V	3280	4822 051 20473	47KΩ 5% SM 0805
2856	5322 122 32531	100pF 5% NPO 50V	3282	4822 051 20331	330Ω 5% 0805
2857	5322 122 32531	100pF 50V 5% 0805 NPO	3283	4822 051 20331	330Ω 5% 0805

					
3284	4822 051 20331	330Ω 5% 0805	3471	4822 051 20224	220KΩ 5% 0,1W
3285	4822 051 20478	4Ω 7 5% 0805	3472	4822 051 20102	1KΩ 5% 0,1W
3286	4822 117 10833	10KΩ 1% 0,1W	3473	4822 051 20473	47KΩ 5% 0,1W
3287	4822 117 10833	10KΩ 1% 0,1W	3474	4822 051 20109	10Ω 5% 0,1W
3288	4822 051 20333	33KΩ 5% 0,1W	3475	4822 051 20109	10Ω 5% 0,1W
3289	4822 117 11383	12KΩ 5% 0805	3485	4822 051 20224	220KΩ 5% 0,1W
3290	4822 117 11383	12KΩ 5% 0805	3486	4822 051 20273	27KΩ 5% 0,1W
3291	4822 051 20272	2K70 5% 0,1W	3487	4822 117 10833	10KΩ % RST SM 0805
3292	4822 051 20109	10Ω 5% 0,1W	3488	4822 117 10833	10KΩ 5% RST SM 0805
3300	4822 051 20153	15KΩ 5% RST SM 0805	3489	4822 051 20224	220KΩ 5% RST SM 0805
3301	4822 051 20223	22KΩ 5% 0,1W	3516	4822 051 20101	100Ω 5% 0,1W
3302	4822 051 20332	3K30 5% 0,1W	3517	4822 051 20101	100Ω 5% 0,1W
3304	4822 051 20473	47KΩ 5% 0,1W	3523	4822 051 20472	4K70 5% 0,1W
3305	4822 051 20473	47KΩ 5% 0,1W	3524	4822 051 20472	4K70 5% 0,1W
3306	4822 051 20101	100Ω 5% 0,1W	3525	4822 051 20473	47KΩ 5% 0,1W
3307	4822 051 20223	22KΩ 5% 0,1W	3526	4822 051 20473	47KΩ 5% 0,1W
3308	4822 051 10008	JUMP MAX 0R05	3551	4822 051 20008	JUMP MAX 0R05
3312	4822 051 20008	JUMP MAX 0R05	3556	4822 051 20223	22KΩ 5% RST SM 0805
3313	4822 051 20008	JUMP MAX 0R05	3557	4822 051 20473	47KΩ 5% 0,1W
3316	4822 051 20153	15KΩ 5% RST SM 0805	3558	4822 051 20473	47KΩ 5% 0,1W
3317	4822 051 20109	10Ω 5% 0,1W	3567	4822 051 20473	47KΩ 5% 0,1W
3318	4822 051 20109	10Ω 5% 0,1W	3568	4822 051 20101	100Ω 5% 0,1W
3319	4822 051 20109	10Ω 5% 0,1W	3569	4822 051 20273	27KΩ 5% 0,1W
3320	4822 051 20109	10Ω 5% 0,1W	3571	4822 051 20471	470Ω 5% 0,1W
3321	4822 051 20109	10Ω 5% 0,1W	3572	4822 051 20104	100KΩ 5% 0,1W
3322	4822 051 20109	10Ω 5% 0,1W	3574	4822 051 20473	47KΩ 5% RST SM 0805
3323	4822 051 20109	10Ω 5% 0,1W	3576	4822 051 20223	22KΩ 5% 0,1W
3324	4822 051 20109	10Ω 5% 0,1W	3577	4822 051 20223	22KΩ 5% RST SM 0805
3325	4822 051 20153	15KΩ 5% RST SM 0805	3578	4822 051 20223	22KΩ 5% 0,1W
3326	4822 051 20153	15KΩ 5% RST SM 0805	3580	4822 117 10833	10KΩ 5% RST SM 0805
3329	4822 116 40255	470R 50% PTC 16V	3581	4822 117 10833	10KΩ 5% RST SM 0805
3330	4822 051 20473	47KΩ 5% RST SM 0805	3588	4822 117 10833	10KΩ 1% 0,1W
3341	4822 051 10008	JUMP MAX 0R05	3589	4822 117 10833	10KΩ 1% 0,1W
3342	4822 051 20473	47KΩ 5% 0,1W	3592	4822 051 20008	JUMP MAX 0R05
3343	4822 051 20008	JUMP MAX 0R05	3593	4822 051 20223	22KΩ 5% 0,1W
3404	4822 051 20224	220KΩ 5% 0,1W	3594	4822 051 20223	22KΩ 5% 0,1W
3405	4822 051 20104	100KΩ 5% 0,1W	3595	4822 051 20473	47KΩ 5% 0,1W
3406	4822 051 20154	150KΩ 5% 0,1W	3596	4822 051 20473	47KΩ 5% 0,1W
3408	4822 051 20273	27KΩ 5% 0,1W	3597	4822 051 20102	1KΩ 5% 0,1W
3411	4822 051 20473	47KΩ 5% 0,1W	3598	4822 051 20223	22KΩ 5% RST SM 0805
3412	4822 051 20101	100Ω 5% 0,1W	3652	4822 051 20102	1KΩ 5% 0,1W
3413	4822 051 20102	1KΩ 5% RST SM 0805	3658	4822 116 40221	8Ω 20%
3414	4822 116 40267	3R3 25% 20V	3659	4822 051 20101	100Ω 5% 0,1W
3417	4822 051 20154	150KΩ 5% 0,1W	3660	4822 116 40221	8Ω 20%
3422	4822 051 20473	47KΩ 5% RST SM 0805	3673	4822 051 20473	47KΩ 5% 0,1W
3423	4822 051 20008	JUMP MAX 0R05	3700	4822 051 20273	27KΩ 5% RST SM 0805
3430	4822 051 20109	10Ω 5% 0,1W	3702	4822 051 20122	1K20 5% 0,1W
3432	4822 051 20473	47KΩ 5% 0,1W	3703	4822 051 20334	330KΩ 5% 0,1W
3433	4822 051 20473	47KΩ 5% 0,1W	3704	4822 051 20822	8K20 5% 0,1W
3442	4822 051 20224	220KΩ 5% 0,1W	3705	4822 051 20183	18KΩ 5% 0,1W
3447	4822 051 20224	220KΩ 5% 0,1W	3709	4822 051 20334	330KΩ 5% 0,1W
3451	4822 051 20224	220KΩ 5% 0,1W	3710	4822 051 20822	8K20 5% 0,1W
3454	4822 051 20224	220KΩ 5% 0,1W	3711	4822 051 20122	1K20 5% 0,1W
3458	4822 051 20104	100KΩ 5% 0,1W	3712	4822 051 20104	100KΩ 5% 0,1W
3460	4822 117 10833	10KΩ 1% 0,1W	3713	4822 051 20104	100KΩ 5% 0,1W
3463	4822 051 20224	220KΩ 5% 0,1W	3714	4822 051 20104	100KΩ 5% 0,1W
3464	4822 051 20224	220KΩ 5% 0,1W	3715	4822 051 20104	100KΩ 5% 0,1W
3465	4822 117 10833	10KΩ 1% 0,1W	3716	4822 051 20109	10Ω 5% 0,1W
3468	4822 051 20008	0Ω JUMP. (0805)	3738	4822 051 20008	0Ω JUMP. (0805)
3470	4822 051 20104	100KΩ 5% 0,1W	3740	4822 051 20008	JUMP MAX 0R05

					
3742	4822 051 20008	0Ω JUMP. (0805)	5201	4822 242 10565	K1101-95880 (36.860MHZ)
3750	4822 051 20008	0Ω JUMP. (0805)	5202	4822 157 71184	10UH 10%
3757	4822 051 20008	0Ω JUMP. (0805)	5203	4822 157 10976	68UH 10%
3762	4822 051 20008	JUMP MAX 0R05	5204	4822 157 71206	BLM21A10PT
3764	4822 051 20473	47KΩ5% RST SM 0805	5205	4822 157 10977	4,7UH 10%
3765	4822 051 20224	220KΩ 5% 0,1W	5275	4822 242 81583	11MHz289 AT-51 30P
3766	4822 051 20473	47KΩ5% RST SM 0805	5276	4822 157 71206	BLM21A10PT
3767	4822 051 20008	0Ω JUMP. (0805)	5277	4822 157 71206	BLM21A10PT
3768	4822 051 20008	0Ω JUMP. (0805)	5278	4822 157 71206	BLM21A10PT
3769	4822 051 20008	0Ω JUMP. (0805)	5400	4822 157 70935	
3800	4822 051 20182	1K8 5% RST SM 0805	5401	4822 157 11206	LAL04 0U22
3801	4822 051 20472	4K7 5% RST SM 0805	5501	4822 157 71206	BLM21A10PT
3802	4822 117 11139	1K5 5% RST SM 0805	5503	4822 157 71206	BLM21A10PT
3804	4822 051 20121	120R 5% RST SM 0805	5650	4822 242 10709	
3810	4822 051 20008	0Ω JUMP. (0805)	5651	4822 157 71206	BLM21A10PT
3812	4822 051 20102	1KΩ5% RST SM 0805	5835	4822 242 81583	LN-G8-238
3813	4822 117 10833	10KΩ1% 0,1W			
3814	4822 051 20473	47KΩ5% RST SM 0805			
3815	4822 051 20473	47KΩ5% RST SM 0805			
3816	4822 051 20473	47KΩ5% RST SM 0805			
3817	4822 051 20473	47KΩ5% RST SM 0805	6200	4822 130 10654	BAT254
3818	4822 051 20473	47KΩ5% RST SM 0805	6201	4822 130 83757	DIO SIG SM BAS216
3819	4822 051 20223	22KΩ5% RST SM 0805	6300	4822 130 83757	DIO SIG SM BAS216
3822	4822 051 20104	100KΩ5% RST SM 0805	6401	4822 130 10488	S3G
3824	4822 117 10833	10KΩ5% RST SM 0805	6402	4822 130 10655	1SR154-400
3825	4822 051 20331	330Ω 5% 0,1W	6403	4822 130 10655	1SR154-400
3828	4822 051 20101	100R 5% RST SM 0805	6406	4822 130 10656	UDZ20B
3830	4822 117 11503	220R 1% 0.1W	6407	4822 130 10655	1SR154-400
3831	4822 117 11503	220R 1% 0.1W	6408	4822 130 10655	1SR154-400
3832	4822 051 20331	330Ω 5% 0,1W	6410	4822 130 83757	DIO SIG SM BAS216
3834	4822 051 20102	1KΩ 5% 0,1W	6411	4822 130 10654	BAT254
3835	4822 117 11449	2K2 1% 0,1W	6412	4822 130 10655	1SR154-400
3837	4822 051 20102	1KΩ 5% 0,1W	6413	4822 130 10654	BAT254
3838	4822 051 20102	1KΩ 5% 0,1W	6414	4822 130 83757	BAS216
3839	4822 051 20105	1M00 5% 0,1W	6415	4822 130 83757	BAS216
3840	4822 051 20102	1KΩ 5% 0,1W	6418	4822 130 83757	BAS216
3841	4822 051 20102	1KΩ 5% 0,1W	6419	4822 130 83757	BAS216
3843	4822 051 20008	JUMP MAX 0R05	6422	4822 130 83757	BAS216
3848	4822 051 20473	47KΩ5% RST SM 0805	6423	4822 130 83757	BAS216
3849	4822 051 20473	47KΩ5% RST SM 0805	6425	4822 130 83757	BAS216
3850	4822 051 20008	JUMP MAX 0R05	6426	4822 130 83757	BAS216
3852	4822 117 10833	10KΩ1% 0,1W	6427	4822 130 83757	BAS216
3854	4822 051 20008	0Ω JUMP. (0805)	6432	4822 130 83757	BAS216
3855	4822 051 20104	100KΩ 5% 0,1W	6653	4822 130 10657	PTZ
3856	4822 051 20223	22KΩ5% RST SM 0805	6654	4822 130 10657	PTZ
3857	4822 051 20333	33KΩ 5% 0,1W	6741	4822 130 83757	BAS216
3858	4822 051 20008	0Ω JUMP. (0805)	6800	4822 130 10837	DIO REG SM UDZ8.2B
3863	4822 051 20101	100Ω 5% 0,1W	6801	4822 130 10838	DIO REG SM UDZ3.3B
3864	4822 051 20104	100KΩ 5% 0,1W	6803	4822 130 10185	UDZ5.6B
3865	4822 051 20101	100Ω 5% 0,1W	6804	4822 130 10185	UDZ5.6B
3866	4822 051 20101	100Ω 5% 0,1W	6805	4822 130 10185	UDZ5.6B
3868	4822 051 20471	470R 5% RST SM 0805	6807	4822 130 10185	UDZ5.6B
3872	4822 051 20101	100Ω 5% 0,1W	6809	4822 130 10185	UDZ5.6B
			6810	4822 130 10185	UDZ5.6B
			6850	4822 130 83757	BAS216
			6852	4822 130 10185	UDZ5.6B
			6853	4822 130 10185	UDZ5.6B
					
5172	4822 157 10975	120UH 10%	7172	4822 130 60511	TRA SIG SM BC847B
5173	4822 157 71184	10U 10% ELO405	7200	4822 130 60511	TRA SIG SM BC847B
5174	4822 157 71206	BLM21A10PT	7201	4822 209 14813	SAA7701H/N108
5175	4822 157 71206	BLM21A10PT			
5200	4822 157 71206	BLM21A10PT			

Service
Service
Service

ERSATZTEILE
für Philips Car Systems

erhalten Sie bei:

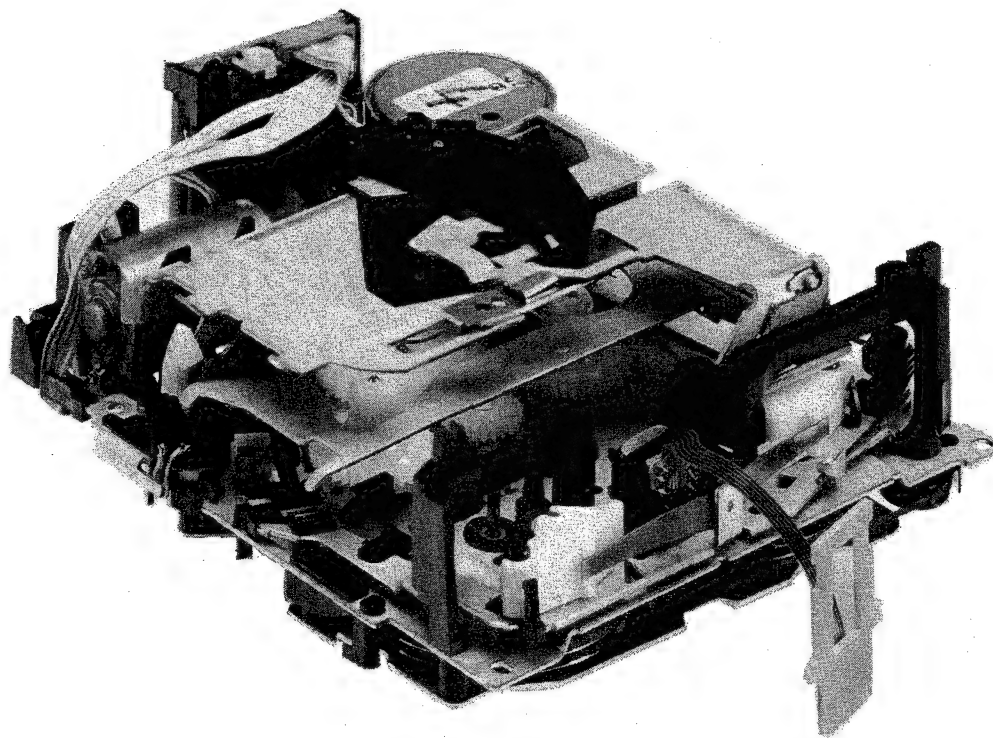


KiVi Service GmbH

Windmühlenstr. 41 · 31178 Giesen/Emmerke
Tel.: 0 51 21 / 6 00 20 · Fax 0 51 21 / 6 00 25 4

Service Manual

12 V



MECHANICAL SPECIFICATION

Operating positions:	Any position from horizontal to 45° standing vertically on the rear side.
Operating temperature:	-20°C to +70°C
Tape speed:	4,76 cm/sec
Wow and flutter:	< 0,5% unweighted < 0,3% weighted
Winding time:	
Test tape: RCA 118 (C60)	< 110 sec
Eject and loading time:	< 2 sec

ELECTRICAL SPECIFICATION

Voltage:	min 10,6 V max 16,0 V
Current - playback:	200 mA
Current - fast wind:	150 mA
Current - eject, standby:	100 µA
Hold in voltage:	8,0 V
Capstan motor:	14,4 V
Servo motor:	2 V DC Play 11,5 V DC Fast, Servo
Playback Crosstalk	
ch. 1 - 2 / 3 - 4	> 36 dB
ch. 2 - 3	> 46 dB

FEATURES

The SCA-4.4 tape deck is usable in several sets. Most of the control functions depend on the hard- and software-configuration of the set in which the deck is installed.

The set µC can control soft eject, emergency eject, standby mode, reverse function, MSS, ME/FE and DOLBY indication.

Some versions of the deck could be equipped with a grooved head and/or a preamplifier circuit.

HANDLING AND DEMOUNTING INSTRUCTIONS

GENERAL

- Protect the tape deck against ESD !
- Plastic catches and snap connections must be released careful with screwdriver or tweezers.
- Cables must be laid in the defined cable guidings after mounting.
- For lubrication see indications in the exploded view.
- To clean tape transport and head only use moist cleaning tapes or piece of cloth, take care that no fluid (alcohol) drops into the bearing.
- For transport lift/carrier assy must be in eject position, do not carry the deck by touching the lift/carrier.
- Use a screwdriver 2,5 mm with insulated shaft for adjusting drift.
- Screw the deck into the set in order: Front right, front left, rear left, rear right.

DEMOUNTING

1. Carrier/lift (44)
 - 1.1 Lift in eject position - put leg of eject spring (12) into mounting position acc. fig. 8 and fig. 2 - J
 - 1.2 Lift in play position - unclamp cassette holder (49) from eject lever (48) with a left-upwards motion acc. fig.1-B
 - 1.3 Lift in eject position - push plastic hook (fig.1-D) and pull out eject lever, remember position of ejector spring (55) and switching pin (54) for re-assembly later on
 - 1.4 Release fixation lever (fig.1-F) by clicking out in left direction and then turn to the right
 - 1.5 Lift in mid position - take out carrier and lift by releasing plastic hooks at the left (fig.1-G)
2. Head support
 - 2.1 Take out carrier/lift according 1.
 - 2.2 Remove head carrier spring (37)
 - 2.3 Turn head support fixation lever acc. fig.3-A
 - 2.4 Position pin of switching lever (20) to max. left point, see fig.3-detail I
 - 2.5 Release plastic snapper (fig.3-H) and take out head support assembly
!!! TAKE CARE NOT TO BENT THE HEAD CARRIER !!!
 - 2.6 Press plastic fixation (fig.3-detail E,F) and take out magnetic head
 - 2.7 Push pressure spring (27) acc. fig.3-D and move it out
 - 2.8 Release plastic hooks (fig.3-B,C) to pull pinch rollers (45+68) out
 - 2.9 Take off anchor spring (13), rotate anchor (2) 90°degrees to take it out (fig.4-A,B,C)
3. Capstan motor (32)

Remove belt (30) from driving wheel, desolder connection cables, unscrew the two torx screws at the bottom of chassis and take out capstan motor
!!! TAKE CARE OF CORRECT AND UNTWISTED MOUNTING OF THE BELT !!!
4. Servo motor (14)

Desolder connection cables and lever up motor out of its clamps (fig.2-F,G)
5. Clutch assy (57-59)
 - 5.1 Remove servo motor acc. 4.
 - 5.2 Cut disk (65) and remove it (must be renewed)
 - 5.3 Pull clutch from the axle (fig.2-H,I)
6. Anchor holder (8) and magnet double (1)
 - 6.1 Desolder cables of magnet
 - 6.2 Swivel anchor holder counter-clockwise and press it off applying force near the pivoting point
 - 6.3 Release plastic clamps of magnet holder and press magnet out from top of the chassis (fig.4-E)
7. Driving belt (30), flywheels (23) and bearings (70)
 - 7.1 Release pivot plate (35) by turning the plastic hooks acc.fig.5-A,B
 - 7.2 Remove pivot plate and driving belt
 - 7.3 Pull out flywheels
 - 7.4 Press bearings out of plastic housings from top side of chassis plate, use a plastic tool with diameter 4mm in order not to damage the housings
 - 7.5 After mounting new flywheels, bearings or pivot plate you have to test wow and flutter because every deck is adjusted individual for these components. If the values of wow and flutter are out of specification, you have to exchange complete deck !
 - 7.6 Degrease capstan axis after re-mounting the flywheels
8. Connection wheel (5), take up wheels (6), backtension springs (69)
 - 8.1 Take out carrier/lift acc. 1.
 - 8.2 Lever up connection wheel from axle (must be renewed)
 - 8.3 Cut disks (65) and remove them (must be renewed)
 - 8.4 Unclamp and pull up wheels with puller (fig.2-A,B)
 - 8.5 Take out backtension springs
9. ME/CR Switch (60).
 - 9.1 Desolder connection cables
 - 9.2 Push with a small pin through the hole at the bottom of the chassis, directly under the switch

10. ON/OFF Switch (26)
- 10.1 Desolder connection cables
- 10.2 Lever up switch or push with a small pin through the hole at the bottom of the chassis, directly under the switch if servo motor and clutch were removed previously
11. Control pins (16), gear lever (17), play reverse lever (18)
- 11.1 Remove flywheels acc. 7
- 11.2 Remove play reverse lever
- 11.3 Put control pins into mounting position acc. fig.6-D,E
- 11.4 Take out gear lever
- 11.5 Pull out control pins
12. Switching lever (20), swivel wheel assembly (7,15,43)
- 12.1 Release spring (53) from black plastic pin
- 12.2 Turn switching lever acc. fig.7-A
- 12.3 Lever up switching lever from axle
- 12.4 Remove connection wheel acc. 8
- 12.5 Take out swivel wheel assembly
13. Switching pin (54), transport rod (25), latch (21)
- 13.1 Remove ON/OFF Switch acc. 10
- 13.2 Lever up switching pin from axle
- 13.3 Remove switching lever acc. 12
- 13.4 Move out transport rod and latch

TOOLS REQUIRED

Test cassette SBC 420	4822 397 30071
Test cassette SBC 419	4822 397 30069
Friction test cassette	4822 395 30054
Puller for clutch (fig.2)	4822 395 60039

ADJUSTMENTS

TORQUE OF REELS (FRICTION)

Adjust potmeter pos. 3409 until friction test cassette shows 9,5 +/- 1,5 mNm in NOR direction (after 2 minutes) and 8,5 +/- 1,5 mNm in REV direction. Backtension must be 0,3 to 0,7 mNm.
If values deviate check lubrication, clutch, take up wheels and backtension springs.

WOW AND FLUTTER, TAPE SPEED

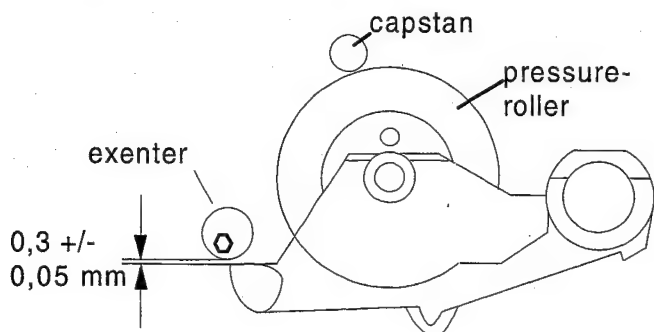
Connect wow and flutter meter to loudspeaker outputs and play the 3150 Hz signal track of test cassette SBC 420. Value should be max. 0,5% (unweighted).

If value deviates check motors, pressure rollers, flywheels, belt, pulley and backtension springs.

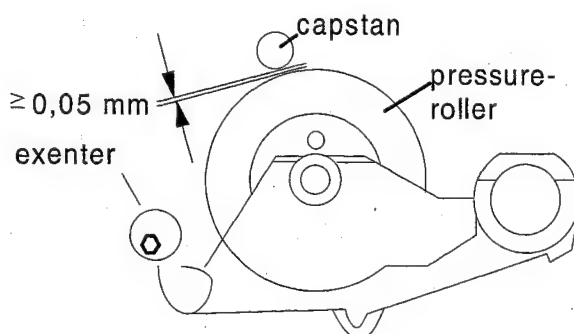
Tape speed can be adjusted with motor potentiometer A (see fig.8). Use a screwdriver with insulated shaft !

PRESSURE ROLLER / CAPSTAN (see figures below)

Adjust clearance play-NOR position between pressure roller and stop head carrier



Adjust clearance FFW position between pressure roller and capstan



EJECTOR 48, HOLDER 49, LIFT 44

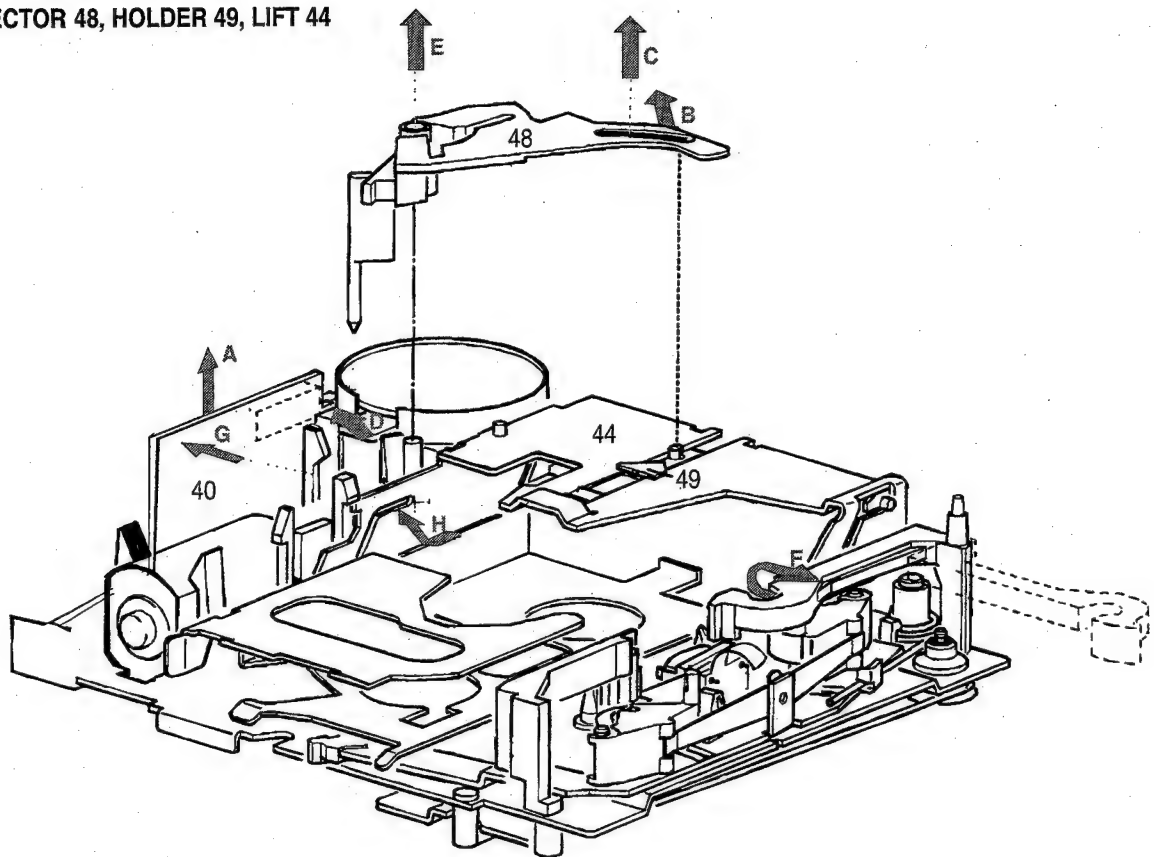


Fig. 1

CLUTCH 59, SWITCH 60, GEAR WHEEL 5, CARRIER 6

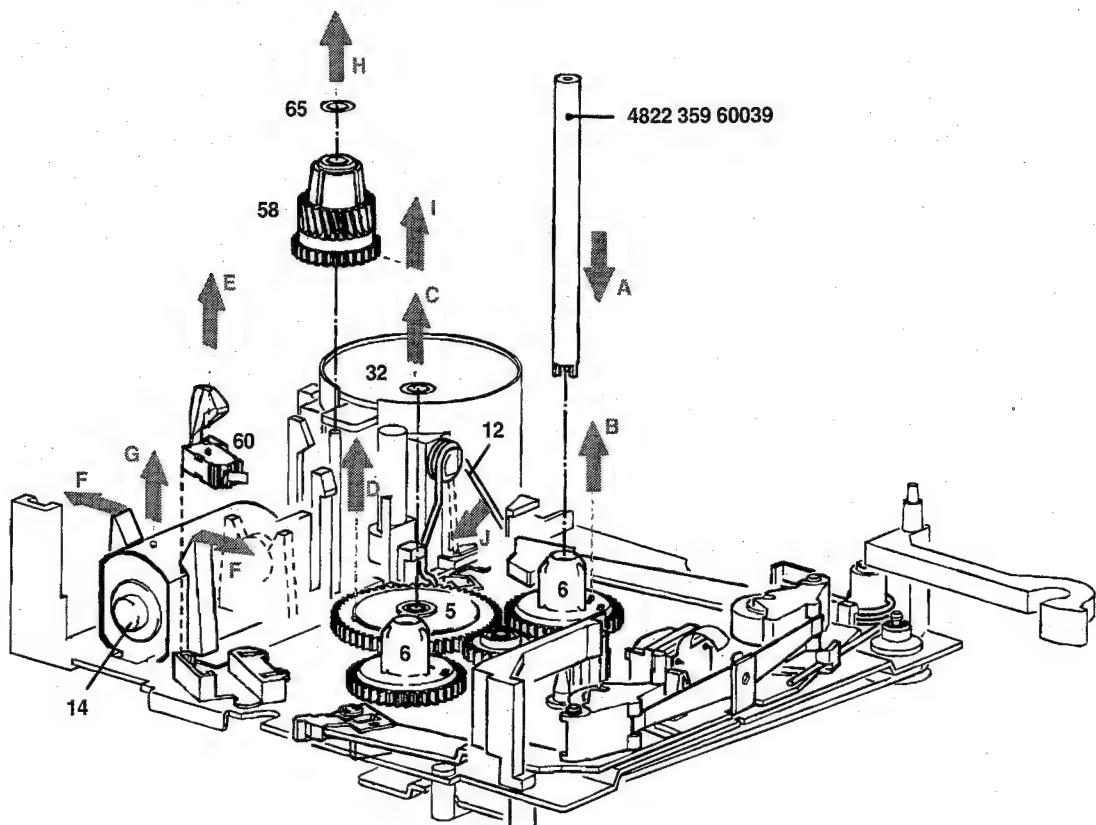


Fig. 2

PRESSURE ROLLER 45, HEAD BRACKET 33, HEAD 34

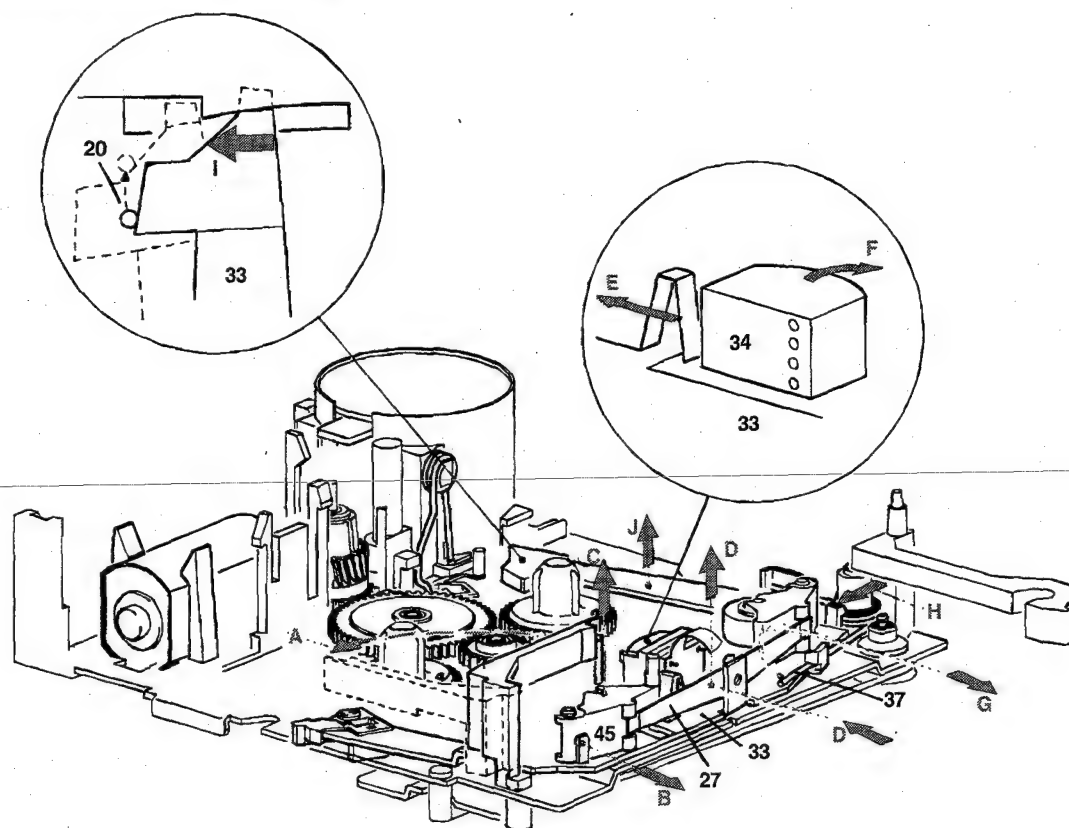


Fig. 3

ANCHOR 3/5, RELAY 1

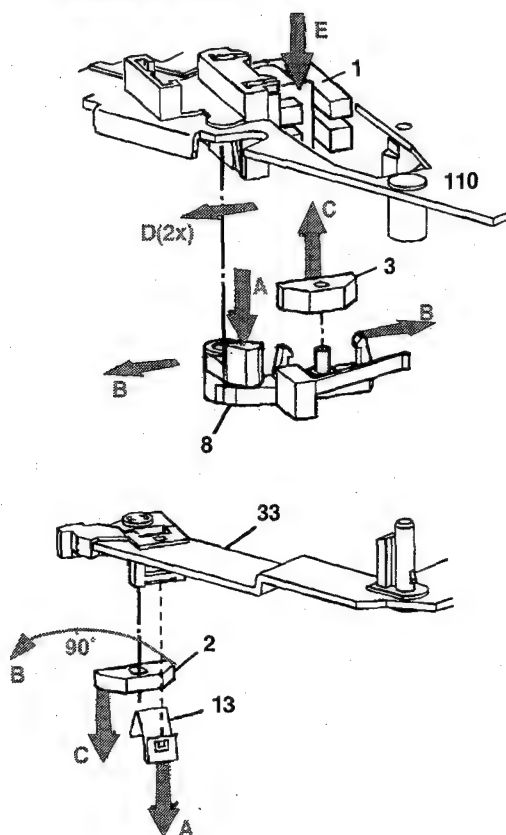


Fig. 4

FLYWHEEL 23, BELT 30

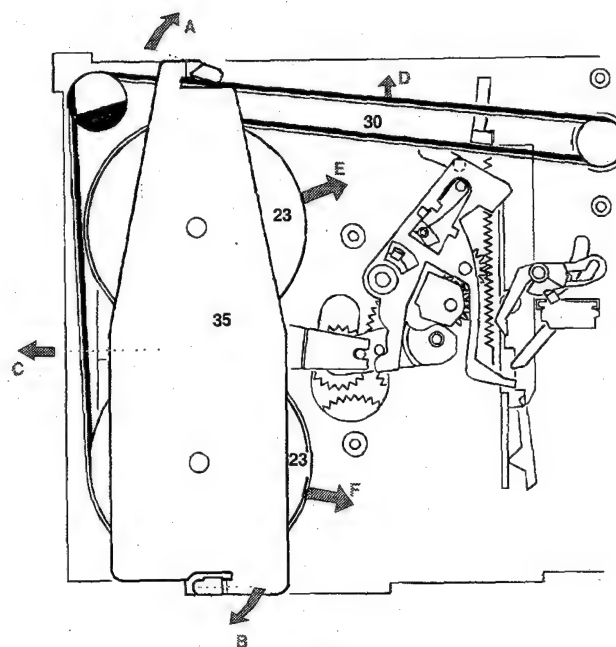


Fig. 5

SEGMENT 16, BRACKET 17, BEARING 70

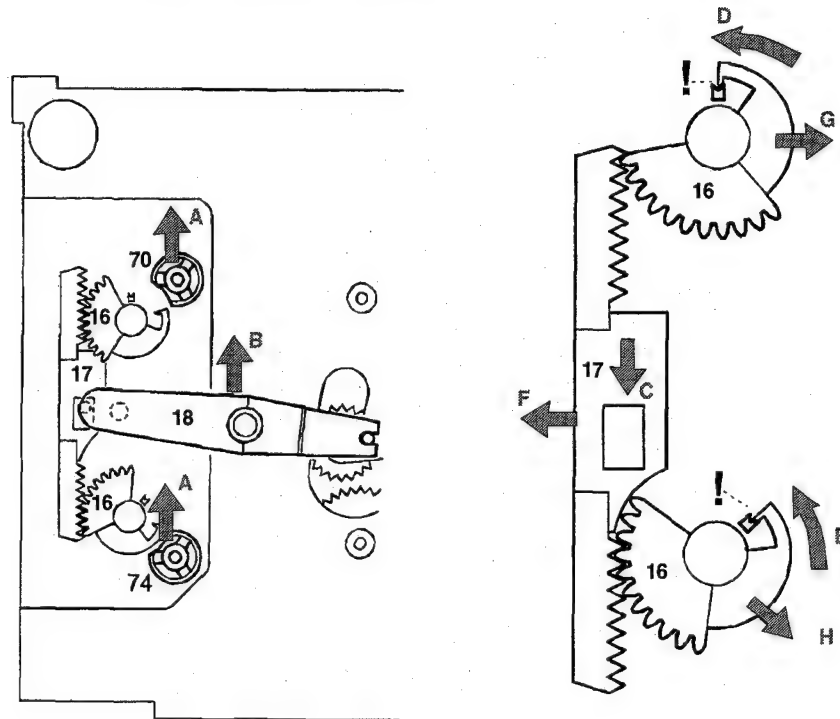


Fig. 6

SWITCH 26, SWIVEL GEAR 7, LEVER 20

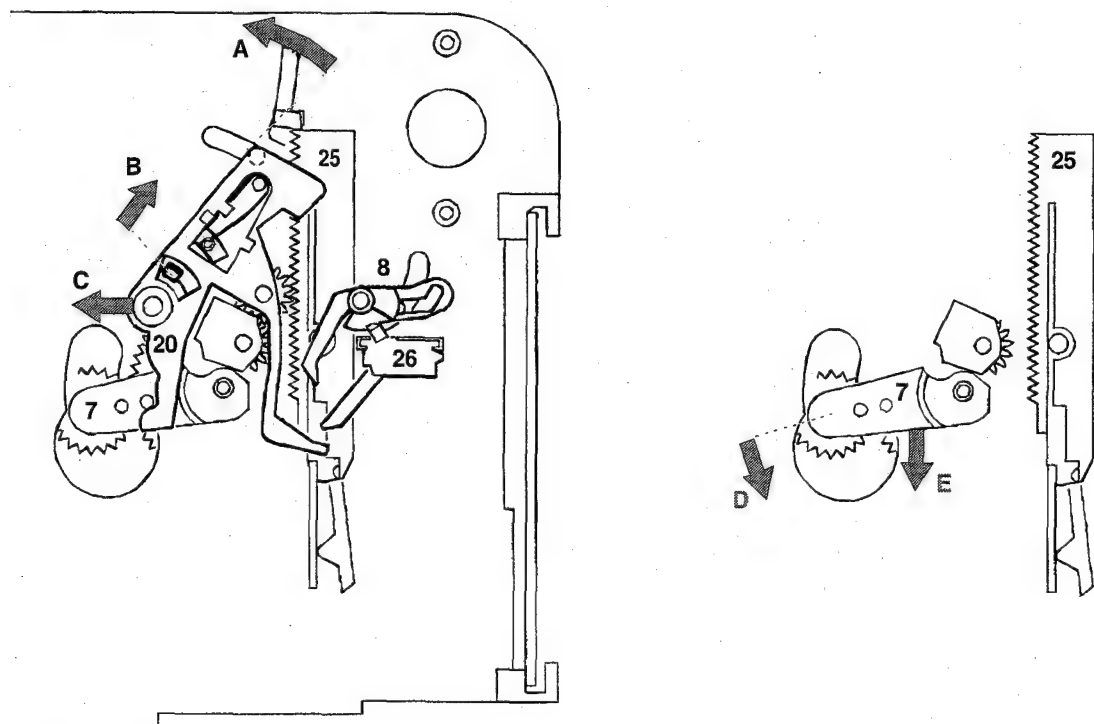


Fig. 7

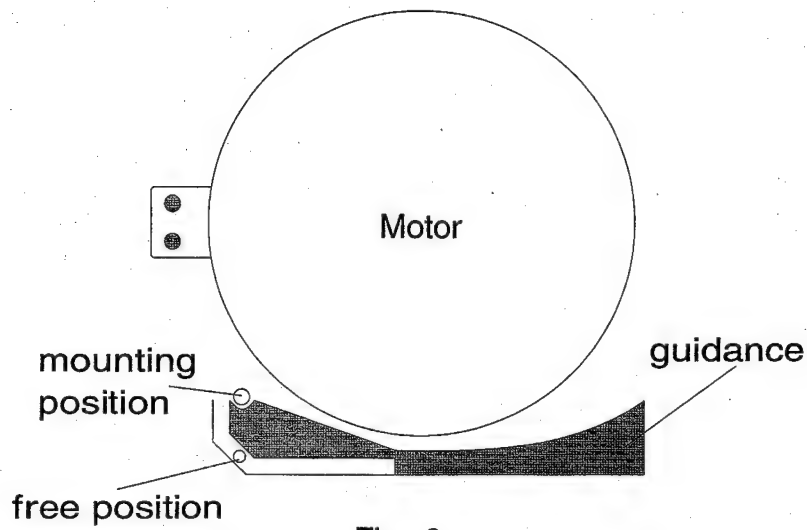
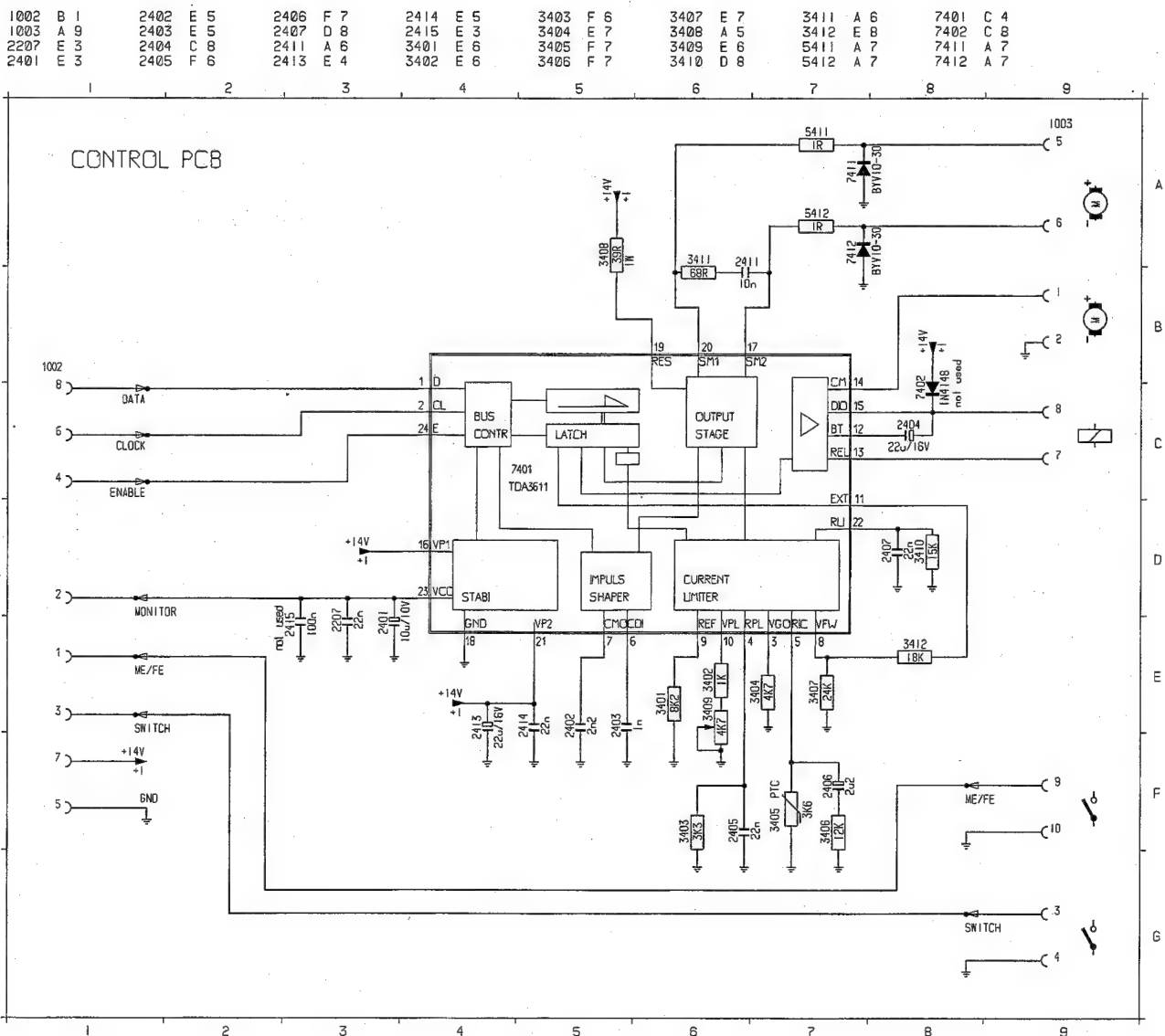


Fig. 8



MEASUREMENTS ON CONTROL PCB

ME/FE: 0,0 V (FE) / 5,0 V (ME/CR)
ON/OFF: 0,0 V (ON) / 5,0 V (OFF)

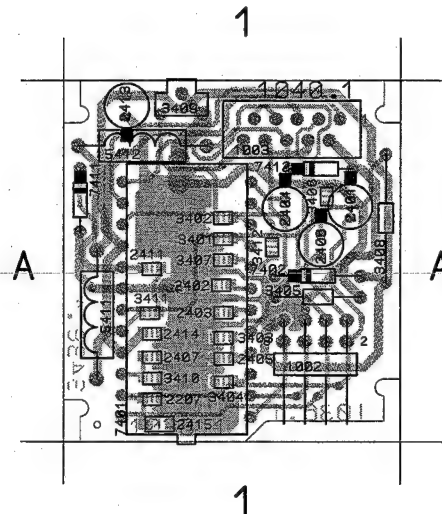
Pos. 7401 TDA 3611

- 1: 5,0 V
- 2: 5,0 V
- 3: 0,7 V / 0,0 V (Sb)
- 4: 0,8 V (PN) / 0,9 V (PR) / 0,3 V (W) / 0,0 V (Sb)
- 5: 0,8 V (PN) / 1,0 V (PR) / 0,4 V (W) / 0,0 V (Sb) / 0,1 V (TA)
- 6: 0,8 V (PN) / 1,0 V (PR) / 0,4 V (W) / 0,0 V (Sb) / 0,1 V (TA)
- 7: 0,7 V (P) / 1,8 V (W) / 0,0 V (Sb) / 0,6 V (TA)
- 8: 3,4 V / 0,0 V (Sb)
- 9: 1,2 V / 0,0 V (Sb)
- 10: 0,5 V / 0,0 V (Sb)
- 11: 3,4 V / 0,0 V (Sb)
- 12: 12,0 V
- 13: 0,5 V / 12,0 V (Sb)
- 14: 0,0 V / 11,5 V (P)
- 15: 11,5 V / 12,0 V (Sb)
- 16: 12,0 V
- 17: 0,1 V (PN) / 2,4 V (PR) / 0,0 V (WN) / 12,0 V (WR) / 0,0 V (Sb)
- 18: GND
- 19: 12,0 V / 8,5 V (P)
- 20: 2,4 V (PN) / 0,1 V (PR) / 12,0 V (WN) / 0,0 V (WR) / 0,0 V (Sb)
- 21: 12,0 V
- 22: 3,6 V (P) / 1,3 V (W) / 0,0 V (Sb)
- 23: 5,0 V
- 24: 5,0 V

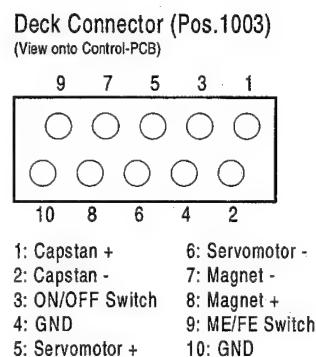
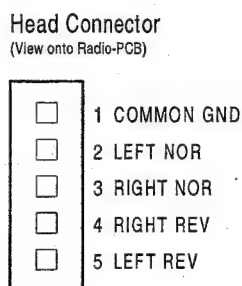
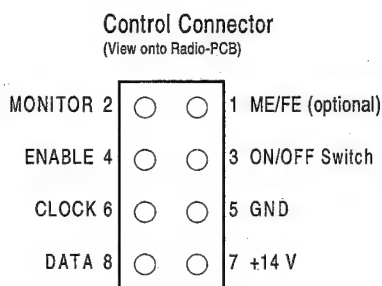
All values measured DC - GND

(P) = Play mode both directions
(W) = Wind mode both directions
(PN) = Play NOR direction
(PR) = Play REV direction
(WN) = Wind NOR direction
(WR) = Wind REV direction
(Sb) = Standby
(TA) = Traffic announcement

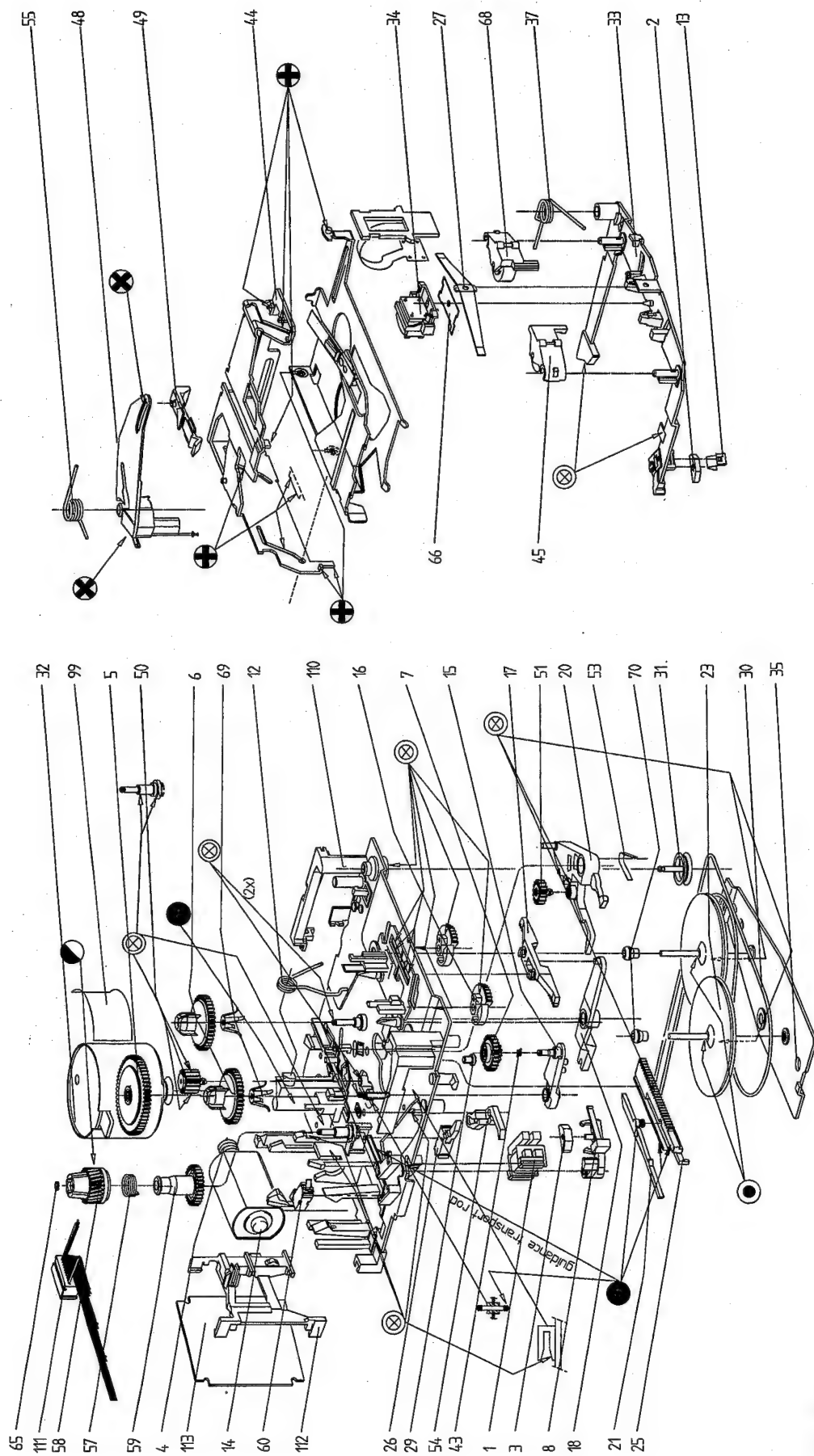
1002 A 1	2413 A 1	3409 A 1
1003 A 1	2414 A 1	3410 A 1
2207 A 1	2415 A 1	3411 A 1
2401 A 1	3401 A 1	3412 A 1
2402 A 1	3402 A 1	5411 A 1
2403 A 1	3403 A 1	5412 A 1
2404 A 1	3404 A 1	7401 A 1
2405 A 1	3405 A 1	7402 A 1
2406 A 1	3406 A 1	7411 A 1
2407 A 1	3407 A 1	7412 A 1
2411 A 1	3408 A 1	



CONNECTORS



Front of Radio ↓



MECHANICAL PARTS

1	4822 281 11051	DOUBLE
2	4822 404 21083	ANCHOR ON SUPPORT 33
3	4822 404 21084	ANCHOR IN HOLDER 8
5	4822 522 32868	WHEEL IDLER
6	4822 528 10776	CARRIER
7	4822 528 70658	ASSY
8	4822 404 21087	FOR ANCHOR 2
1	4822 492 70556	FOR ANCHOR 2
14	4822 361 30297	SERVO ASSY
16	4822 522 32869	NORMAL/REVERSE
17	4822 404 21089	DRIVING 16
20	4822 404 21086	ASSY SERVO GEARWHEEL
23	4822 528 81378	FLYWHEEL
26	4822 277 11215	ON/OFF
27	4822 492 70557	FOR PRES. ROLLER 45
29	4822 502 12548	FIX MOTOR 32
30	4822 358 31053	BELT, DRIVING
31	4822 528 81144	DIVERTING BELT
32	4822 361 30294	CAPSTAN
33	4822 404 21088	FOR HEAD, PRES. ROLLER
34	4822 249 30157	WITH FLEXPRINT
44	4822 466 82631	FOR CASSETTE
45	4822 528 81377	REVERSE
48	4822 404 21091	EJECT
49	4822 404 21092	HOLDING CASSETTE
50	4822 522 32871	COUPLING
59	4822 522 10435	ASSY
60	4822 277 11216	ME/CR
65	4822 532 52348	FOR CARRIER CLUTCH
68	4822 528 81449	NORMAL
69	4822 492 70926	UNDER CARRIER
70	4822 520 30539	FOR FLYWHEEL
111	4822 321 61954	CABLE, CONNECT
112	4822 256 92048	FOR PCB
113	4822 214 52077	PCB KOMPL.

ELECTRICAL PARTS

2207	5322 122 32654	22NF10%X7R	63V
2401	4822 124 22748	10UF	10V
2402	4822 122 33127	2,2NF10%X7R	63V
2403	4822 122 33178	1NF 20% X7R	50V
2404	4822 124 23279	22UF20%	16V
2405	5322 122 32654	22NF10%X7R	63V
2406	4822 124 41013	2,2UF	25V
2407	5322 122 32654	22NF10%X7R	63V
2411	4822 122 33177	10NF 20% X7R	50V
2413	4822 124 23279	22UF20%	16V
2414	5322 122 32654	22NF10%X7R	63V
3401	4822 051 20822	8K20	5% 0,1W
3402	4822 051 20102	1K00	5% 0,1W
3403	4822 051 20332	3K30	5% 0,1W
3404	4822 051 20472	4K70	5% 0,1W
3405	4822 116 40241	3K6	PTC
3406	4822 051 20123	12K00	5% 0,1W
3407	4822 051 20243	24K00	5% 0,1W
3408	4822 053 10399	39R00	5% 1W
3409	5322 101 11014	5K	POTMETER
3410	4822 051 20153	15K00	5% 0,1W
3411	4822 051 20689	68R00	5% 0,1W
3412	4822 051 20183	18K00	5% 0,1W
5411	4822 050 21008	1R00	1% 0,6W
5412	4822 050 21008	1R00	1% 0,6W
7401	4822 209 32207	TDA3611	
7411	4822 130 32911	BYV10-30	
7412	4822 130 32911	BYV10-30	
AIDS AND TOOLS			
100	4822 390 10107	ISOFLEX	PDP65
101	4822 390 20128	TOPAS	L30
103	4822 390 10123	MOBIL OIL	SHC 634
104	4822 390 20027	GLEITMO	805K
105	4822 390 20128	L30	TF
107	4822 390 20139	GLEITMO	585K

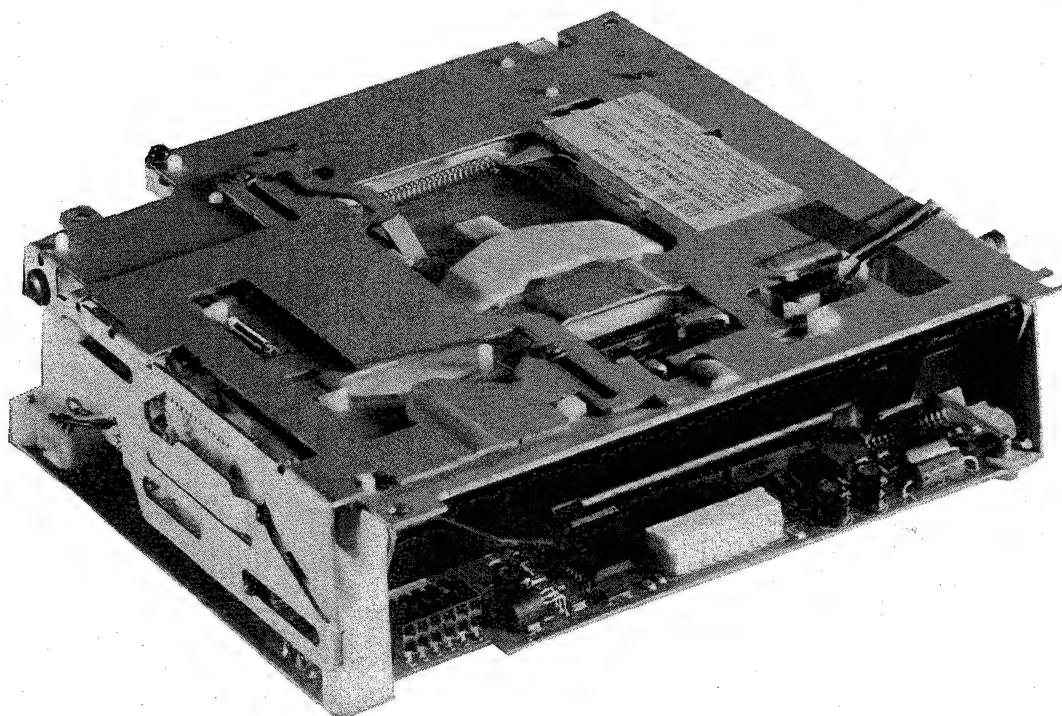
Service
Service
Service



VIDE-V16131

Service Manual

12 V 



**CLASS 1
LASER PRODUCT**

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SPEZIFICATION

Operating voltage:	10 V - 16 V
Operating temperature:	15°C - +70°C
Accesstime:	max. 2sec (inner to outer track)
Load- / Eject- time:	max. 4sec
Mounting angle (see page 5):	-10° - +20° +30° - +60° (optional)
Playability:	
- Testdisc 5A (4822 397 30096):	wedges 900m (track 9, time 19'59) blackdots - 800µm (track 17, time 40'04) fingerprints (track 18 + 19, time 42'46 + 45'06)
- Scewdisc (4822 701 11922):	first 10min without interruptions
- Eccentricity disc (4822 701 11923):	first 10min without interruptions

NOTE: Switch off power supply before connect and disconnect CDM 9 - Module and set (danger of shortcircuit)!

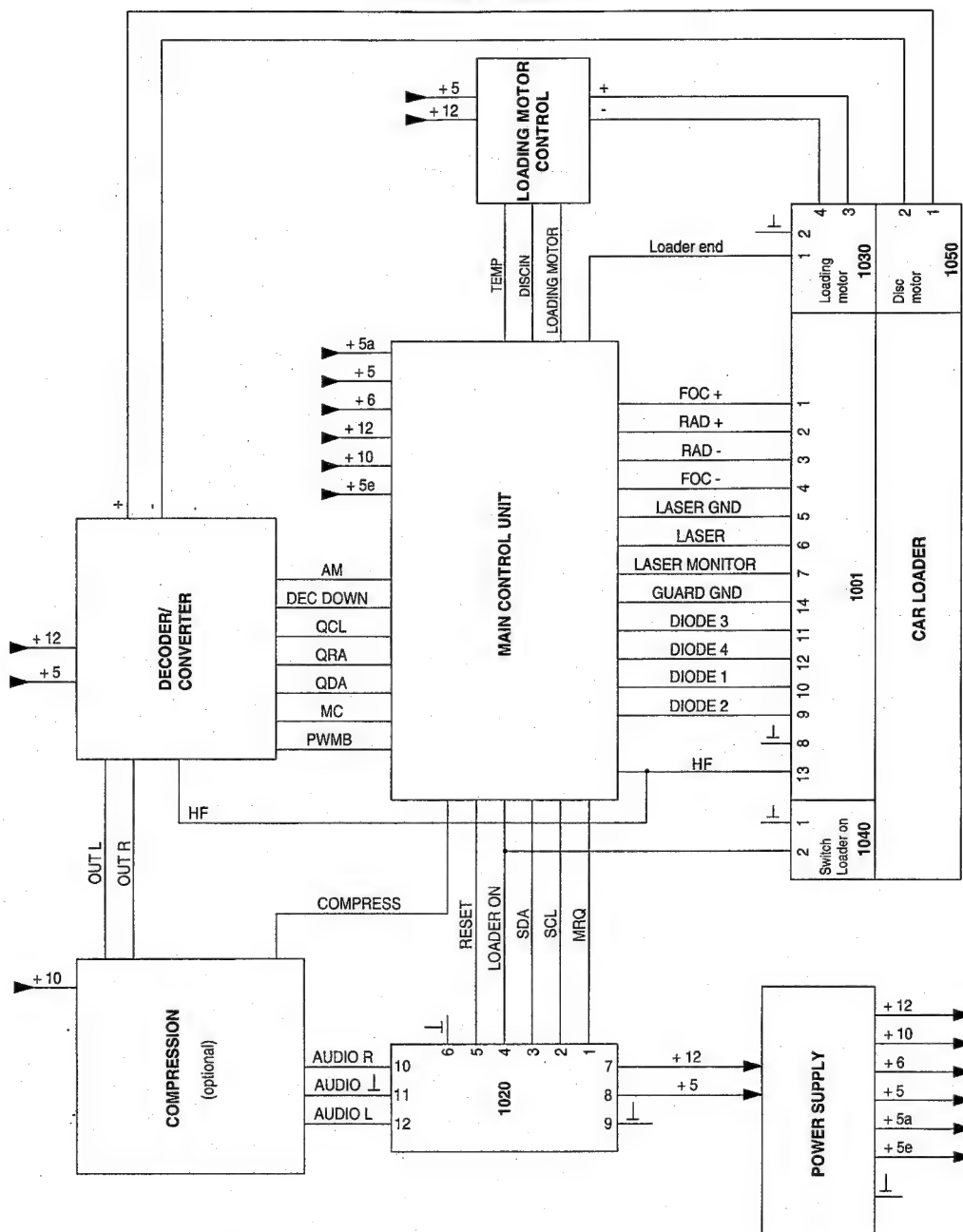
NOTE: Use the coded plugs and sockets to build the needed extension cables.

NOTE: The chassis of CDM 9 is not grounded when separated from the set.

NOTE: Only PLAY but no LOAD and EJECT can be realized in upside-down position.

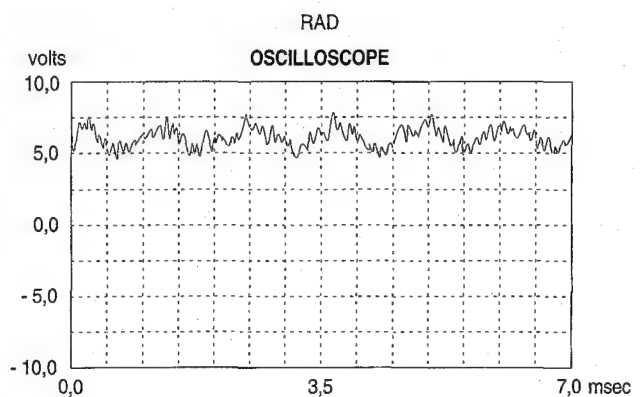
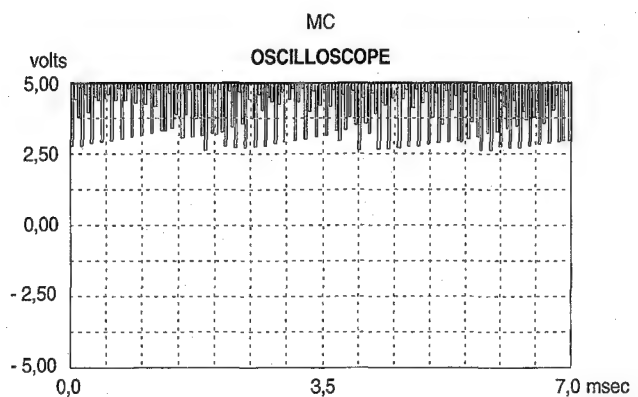
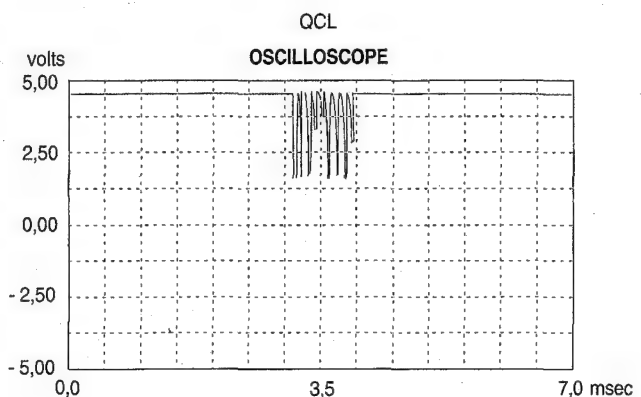
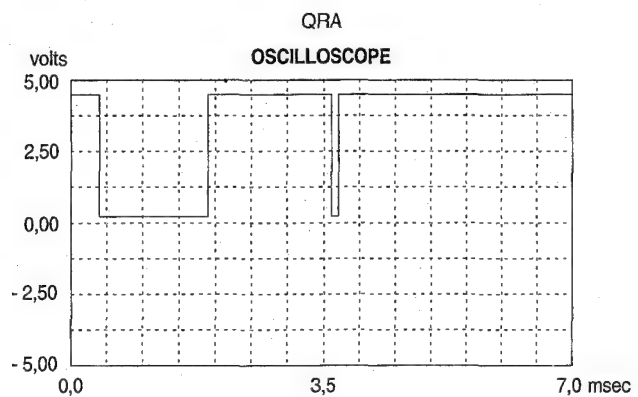
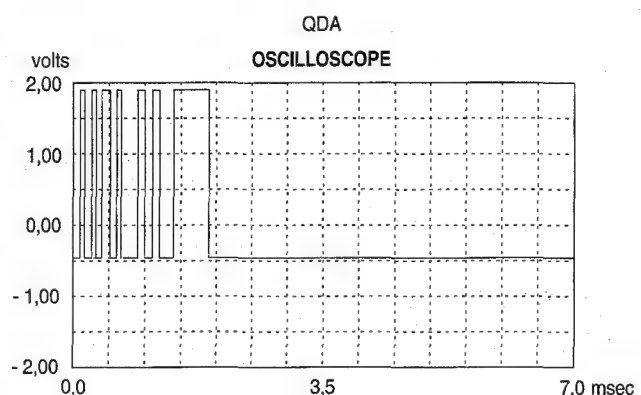
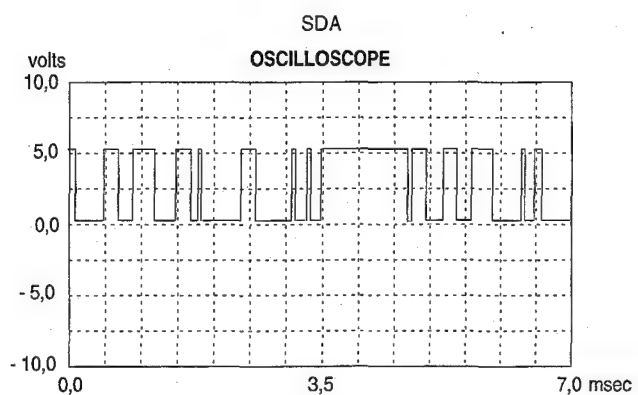
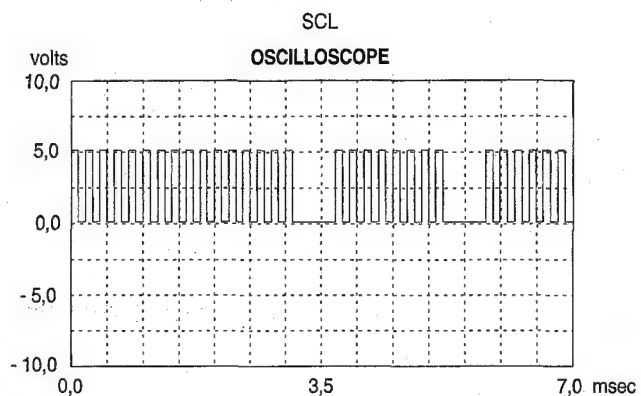
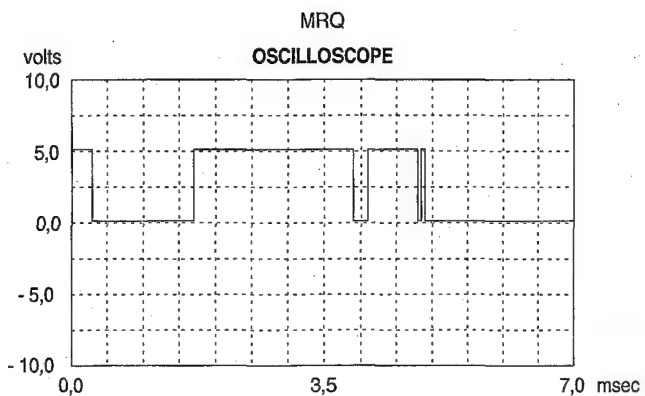
NOTE: Measurements are done in PLAY (P), STANDBY (S) and DISC OUT (O),
DC → GND.

Wiring Diagram



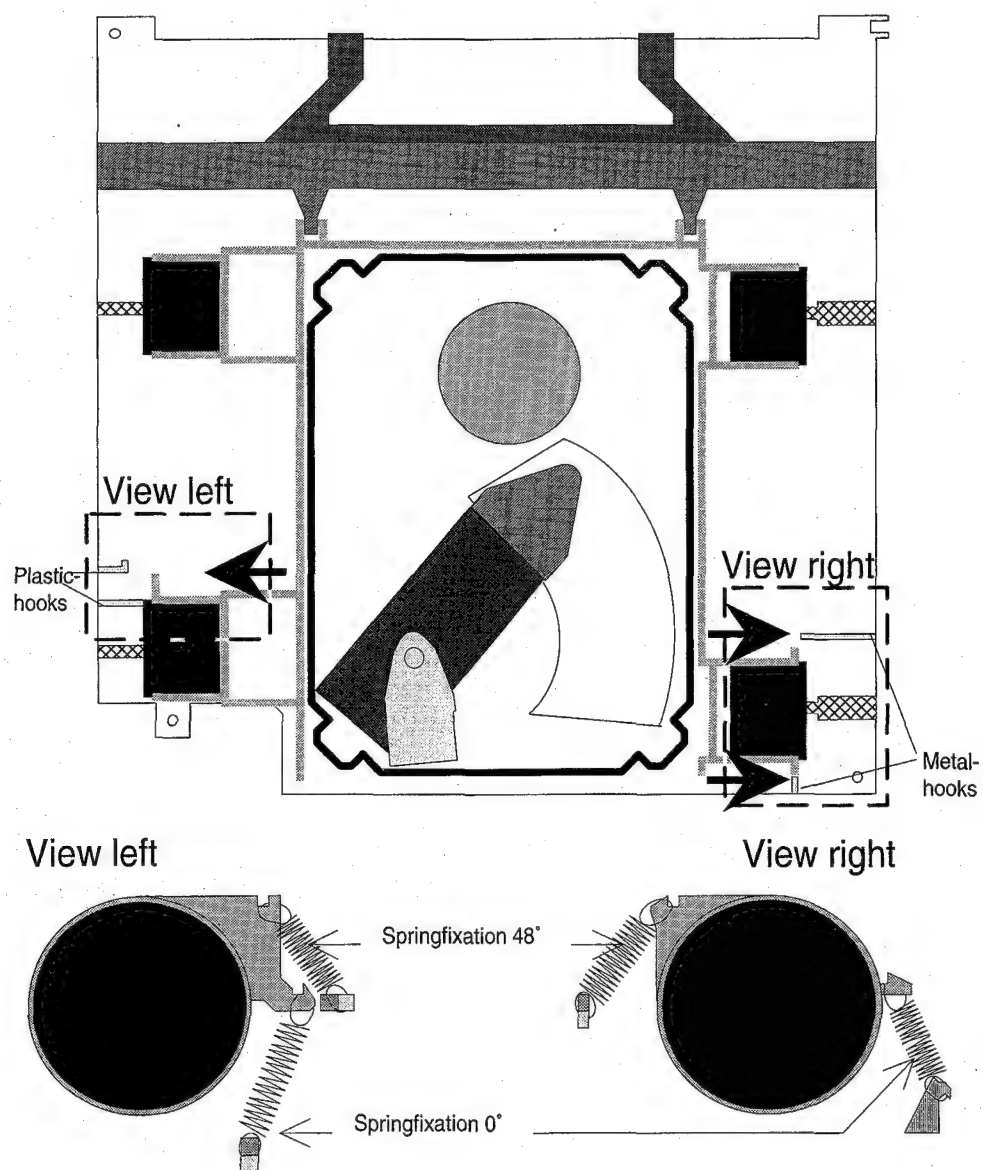
all values measured in PLAY (P), DC - GND

+ 5	= 5,0 V	AM	= 5,0 V
+ 5a	= 4,7 V	MC	= see oscillogram MC
+ 5e	= 5,0 V	TEMP	= 3,9 V (0,0 V if T ≥ 70°C)
+ 6	= 6,0 V	DISC MOTOR +	= 5,4 V
+ 10	= 8,4 V	DISC MOTOR -	= 4,8 V
+ 12	= 12,0 V	LOADING MOTOR	= 3,4 V (5,0 V load, 0,0 V eject)
AUDIO-LEVEL (L+R)	= 0,0 V (1,2 V _{eff})	LOADING MOTOR +	= 3,7 V (0,9 V load, 6,3 V eject)
MRQ	= see oscillogram MRQ	LOADING MOTOR -	= 3,7 V (6,3 V load, 0,9 V eject)
SCL	= see oscillogram SCL	LOADER END	= 0,0 V (5,0 V CD OFF)
SDA	= see oscillogram SDA	DISCIN	= 3,8 V (0,0 V during load)
LOADER ON	= 5,0 V	FOC +	= 2,4 V
RESET	= 30 mV	FOC -	= 2,6 V
COMPRESS	= HIGH when COMPRESS OFF, LOW when COMPRESS ON	RAD +	= see oscillogram RAD
HF	= 3,1 V (POS.1001, PIN 13)	RAD -	= see oscillogram RAD
QDA	= see oscillogram QDA	LASER GND	= 0,0 V
QRA	= see oscillogram QRA	LASER	= 2,0 V
QCL	= see oscillogram QCL	LASER MONITOR	= 0,2 V
PWMB	= 5,0 V (intermittend data when focussing)	GUARD GND	= 0,0 V
DEC. DOWN	= 0,0 V	DIODE 1	= 1,3 V
		DIODE 2	= 1,3 V
		DIODE 3	= 1,3 V
		DIODE 4	= 1,3 V

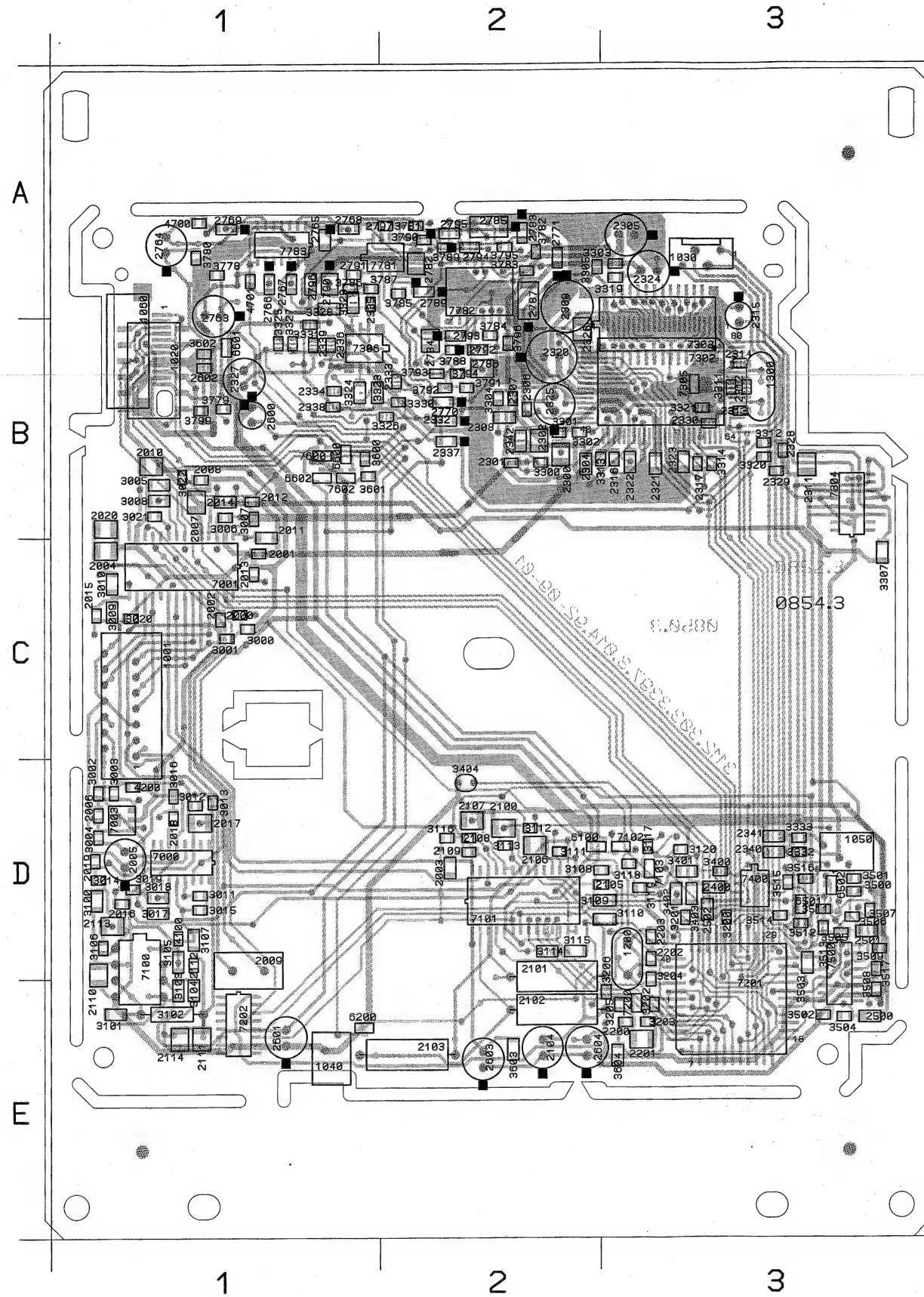


Adaptation of CDM 9 for playability at a mounting angle of 30° to 60°

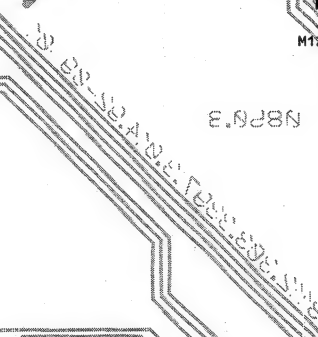
Take the rear springs from the suspensions and put them in the additional fixation hooks as shown in the figure below (see also service-information A92 - 402).



Technician remarks



M100 B 2	M307 B 1	M475 D 3	2014 B 1	2767 A 1	3307 C 3	7000 D 1
M101 B 2	M308 E 2	M477 D 3	2015 C 1	2768 A 1	3311 B 3	7001 C 1
M102 B 2	M312 B 1	M478 D 1	2016 D 1	2769 A 1	3312 B 3	7003 D 1
M103 B 2	M401 C 1	M479 E 1	2017 D 1	2770 B 2	3313 B 2	7100 D 1
M104 A 3	M402 C 1	M480 E 1	2018 D 1	2771 A 2	3314 B 3	7101 D 2
M105 B 1	M403 C 1	M481 D 1	2019 D 1	2782 A 2	3319 A 3	7102 D 3
M106 B 2	M404 C 1	M482 E 1	2020 B 1	2783 A 2	3320 B 3	7103 D 3
M107 B 2	M405 C 1	M483 D 1	2100 D 2	2784 B 2	3321 B 3	7200 E 3
M108 B 2	M406 C 1	M484 E 1	2101 D 2	2785 A 2	3323 B 1	7201 E 3
M109 B 3	M407 C 1	M485 B 1	2102 E 2	2786 B 2	3324 B 1	7202 E 1
M110 B 3	M408 C 1	M486 E 3	2103 E 1	2787 A 2	3325 B 1	7302 B 3
M111 B 3	M409 C 1	M487 D 3	2104 E 2	2789 A 2	3326 B 2	7303 B 3
M112 B 3	M410 C 1	M488 D 3	2105 D 2	2790 A 1	3327 B 1	7304 B 3
M113 A 2	M411 D 1	M489 D 3	2106 D 2	2791 A 1	3328 A 1	7305 B 3
M114 B 3	M412 D 1	M490 D 3	2107 D 2	2792 B 2	3329 A 1	7306 B 1
M115 C 3	M413 C 1	M501 A 2	2108 D 2	2793 B 2	3330 B 2	7400 D 3
M116 C 3	M414 C 1	M502 A 2	2109 D 2	2794 A 2	3331 B 1	7500 D 3
M117 B 3	M415 C 1	M503 A 2	2110 D 1	2795 A 2	3332 D 3	7600 B 1
M118 B 3	M416 C 1	M505 A 2	2111 E 1	2796 A 1	3333 D 3	7602 B 1
M119 B 3	M417 C 1	M506 A 2	2112 D 1	2797 A 2	3400 D 3	7701 A 2
M120 B 3	M418 B 1	M507 A 2	2113 D 1	3000 C 1	3401 D 3	7702 A 2
M121 B 3	M419 C 1	M508 B 2	2114 E 1	3001 C 1	3402 D 3	7703 A 1
M122 B 3	M420 C 1	M509 A 2	2200 E 3	3002 D 1	3403 D 3	
M123 B 2	M421 C 1	M510 B 2	2201 E 3	3003 D 1	3404 D 2	
M124 B 3	M422 C 1	M511 B 2	2202 D 3	3004 D 1	3500 D 3	
M125 B 3	M423 B 1	M512 B 2	2203 D 3	3005 B 1	3501 D 3	
M126 B 3	M424 B 1	M513 B 2	2300 B 2	3006 B 1	3502 E 3	
M127 B 3	M425 C 1	M514 A 2	2301 B 2	3007 B 1	3503 D 3	
M128 C 3	M426 B 1	M515 A 2	2302 B 2	3008 B 1	3504 E 3	
M129 C 3	M427 C 1	M516 A 1	2304 A 2	3009 C 1	3505 D 3	
M130 B 3	M428 C 1	M517 A 2	2305 A 3	3010 C 1	3506 D 3	
M131 B 2	M429 B 1	M518 A 2	2306 B 2	3011 D 1	3507 D 3	
M132 B 3	M430 B 1	M519 A 2	2307 B 2	3012 D 1	3508 E 3	
M133 B 2	M431 B 1	M520 A 2	2308 B 2	3013 D 1	3509 D 3	
M134 B 3	M432 D 1	M521 A 2	2309 A 2	3014 D 1	3511 D 3	
M135 A 3	M433 D 1	M522 A 2	2311 B 3	3015 D 1	3512 D 3	
M136 B 2	M434 D 1	M523 B 2	2312 B 3	3016 D 1	3513 D 3	
M137 B 1	M435 D 1	M524 A 2	2313 B 3	3017 D 1	3514 D 3	
M138 B 2	M436 C 1	M525 B 2	2314 B 3	3018 D 1	3515 D 3	
M139 B 1	M437 D 1	M526 B 2	2315 B 3	3019 D 1	3516 D 3	
M140 A 1	M438 D 1	M527 A 1	2316 B 3	3020 C 1	3517 D 3	
M141 B 1	M439 D 1	M528 A 1	2317 B 3	3021 B 1	3600 B 1	
M142 B 1	M440 D 1	M529 A 1	2320 B 2	3022 B 1	3601 B 1	
M143 A 1	M441 C 1	M530 A 1	2321 B 3	3100 D 1	3602 B 1	
M144 A 1	M442 D 2	M531 A 1	2322 B 3	3101 E 1	3603 E 2	
M145 B 1	M443 D 2	M532 B 2	2323 B 3	3102 E 1	3604 E 3	
M146 B 2	M444 D 2	M533 A 1	2324 A 3	3103 E 1	3778 A 1	
M147 B 3	M445 D 2	M534 A 1	2325 B 2	3104 E 1	3779 B 1	
M148 D 3	M446 D 2	M535 A 1	2326 B 2	3105 D 1	3780 A 1	
M149 D 3	M447 D 2	M536 B 1	2327 B 1	3106 D 1	3781 A 2	
M200 D 3	M448 D 2	M537 B 1	2328 B 3	3107 D 1	3782 A 2	
M201 D 3	M449 E 3	M544 A 1	2329 B 3	3108 D 2	3783 A 2	
M202 D 3	M450 D 2	M545 A 1	2330 B 3	3109 D 3	3784 B 2	
M203 D 3	M451 D 2	M547 A 1	2332 B 2	3110 D 3	3785 A 2	
M204 D 3	M452 D 2	M549 A 1	2333 B 2	3111 D 2	3786 A 1	
M205 D 3	M453 D 1	1001 C 1	2334 B 1	3112 D 2	3787 A 1	
M206 D 3	M454 E 2	1020 B 1	2335 A 1	3113 D 2	3788 B 2	
M207 D 3	M455 D 2	1030 A 3	2336 B 1	3114 D 2	3789 A 2	
M208 D 3	M456 D 2	1040 E 1	2337 B 2	3115 D 2	3790 A 2	
M209 E 3	M457 D 2	1050 D 3	2338 B 1	3116 D 2	3791 B 2	
M210 E 3	M458 D 1	1060 A 1	2339 B 1	3117 D 3	3792 B 2	
M211 D 3	M459 E 1	1200 D 3	2340 D 3	3118 D 3	3793 B 2	
M212 D 3	M460 D 2	1300 B 3	2341 D 3	3119 D 3	3794 B 2	
M213 D 3	M461 D 2	2000 C 1	2342 B 2	3120 D 3	3795 A 2	
M214 D 3	M462 D 2	2001 C 1	2400 D 3	3200 D 3	3796 B 2	
M215 D 3	M463 E 3	2002 C 1	2500 E 3	3201 D 3	3799 B 1	
M216 D 3	M464 D 1	2003 D 2	2501 D 3	3202 E 3	4100 D 1	
M217 D 3	M465 B 1	2004 C 1	2502 D 3	3203 E 3	4200 D 1	
M218 D 3	M466 B 1	2005 D 1	2600 B 1	3204 E 3	4700 A 1	
M219 D 3	M467 B 1	2006 D 1	2601 E 1	3205 E 3	4701 A 1	
M220 D 3	M468 E 2	2007 B 1	2602 B 1	3206 E 3	5100 D 2	
M300 B 1	M469 D 3	2008 B 1	2603 E 2	3300 B 2	5200 E 1	
M302 B 1	M470 B 1	2009 D 1	2604 E 2	3301 B 2	5501 D 3	
M303 B 2	M471 B 1	2010 B 1	2703 A 1	3302 B 2	5502 D 3	
M304 B 1	M472 E 2	2011 B 1	2764 A 1	3303 A 3	5600 B 1	
M305 C 2	M473 E 3	2012 B 1	2765 A 1	3304 B 2	5601 B 1	
M306 B 1	M474 D 3	2013 C 1	2766 A 1	3305 A 2	5602 B 1	



POS. 7302 SAA 7341

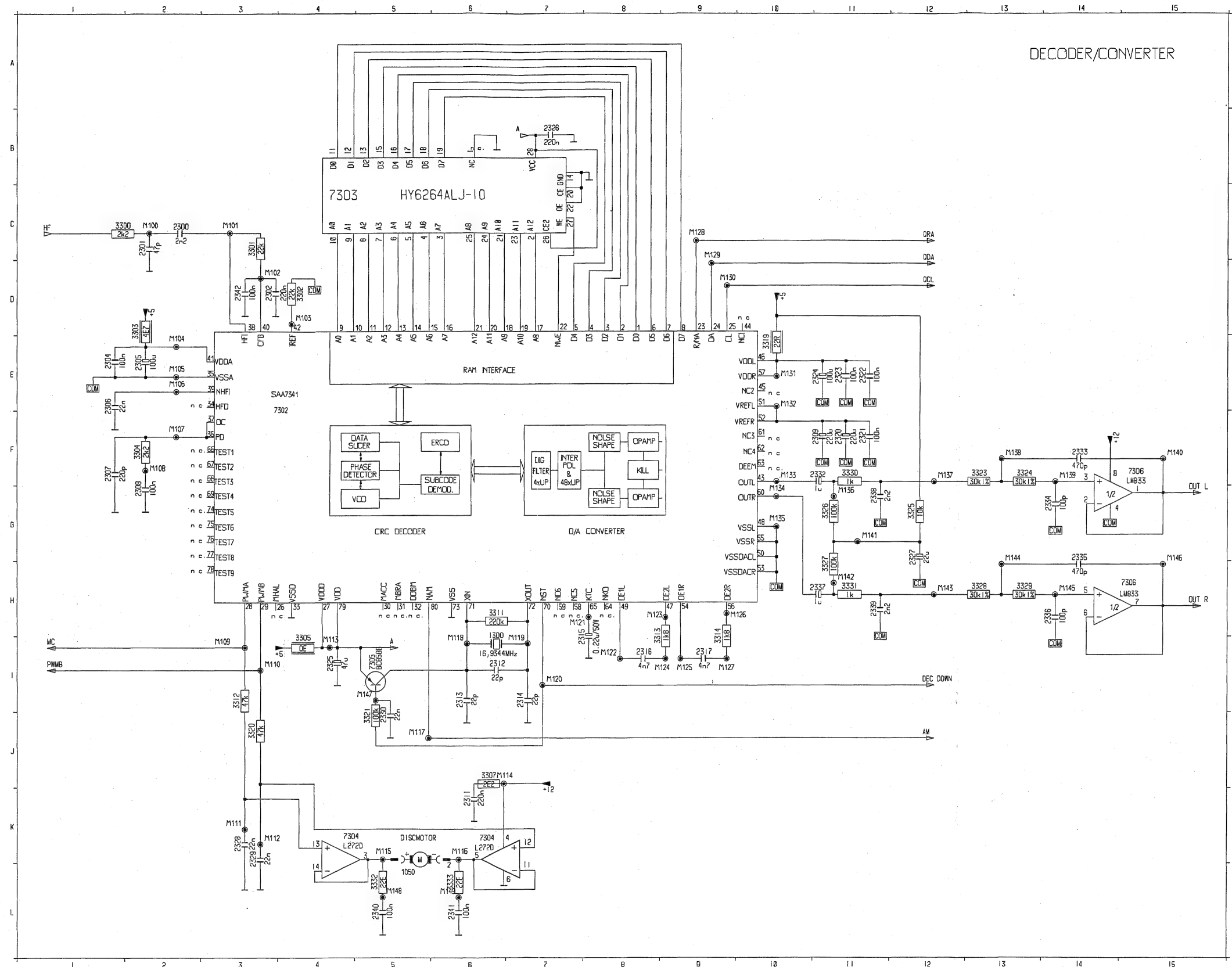
M128	1 - 22: DATA
M129	23: see QRA (P) / 40 mV (S,O)
M130	24: see QDA (P) / 0,0 V (S,O)
	25: see QCL (P) / 5,0 V (S,O)
	26: nc
M113	27: 5,0 V (P,S,O)
M109	28: see MC (P) / 0,0 V (S,O)
M110	29: 5,0 V (P,S,O)
	30 - 32: nc
	33: GND
	34: nc
	35: GND
M107	36: 2,8 V (P) / 130 mV (S,S-O)
M107	37: 2,8 V (P) / 130 mV (S,S-O)
	38: 2,5 V (P,S,O)
M101	39: 2,5 V (P,S,O)
M106	40: 2,5 V (P,S,O)
M102	41: 5,0 V (P,S,O)
M104	42: 2,2 V (P,S,O)
M103	43: 2,2 V (P,S,O)
M133	44 - 45: nc
	46: 4,4 V (P,S,O)
M131	47: 2,2 V (P) / 2,3 V (S,O)
M123	48: GND
M122	49: AF (P) / 0,0 V (S,O)
	50: GND
M132	51: 2,2 V (P,S,O)
M132	52: 2,2 V (P,S,O)
	53: GND
M125	54: AF (P) / 0,0 V (S,O)
	55: GND
M126	56: 2,2 V (P) / 2,3 V (S,O)
M131	57: 4,4 V (P,S,O)
	58 - 59: nc
M134	60: 2,2 V (P,S,O)
	61 - 64: nc
M121	65: 5,0 V (P,S,O)
	66 - 69: nc
M120	70: DEC.DOWN
M118	71: 2,2 V (P) / 5,0 V (S,O)
M119	72: 2,3 V (P) / 0,0 V (S,O)
	73: GND
	74 - 78: nc
M113	79: 5,0 V (P,S,O)
M117	80: 5,0 V (P,S,O)

POS. 7303 HY 6264 ALJ-10

1: GND
2 - 13: DATA
14: GND
15 - 19: DATA
20: GND
21: DATA
22: GND
23 - 25: DATA
26: 5,0 V (P,S,O)
27: DATA
28: 5,0 V (P,S,O)

POS. 7304 L 272D

	1: nc
	2: nc
M115	3: 4,2 V (P) / 5,0 V (S,O)
M114	4: 12,0 V (P,S,O)
M116	5: 5,0 V (P,S,O)
	6: GND
	7: nc
	8: nc
	9: nc
	10: nc
M116	11: 5,0 V (P,S,O)
M112	12: 5,0 V (P,S,O)
M111	13: 4,2 V (P) / 5,0 V (S,O)
M115	14: 4,2 V (P) / 5,0 V (S,O)
	15: nc
	16: nc

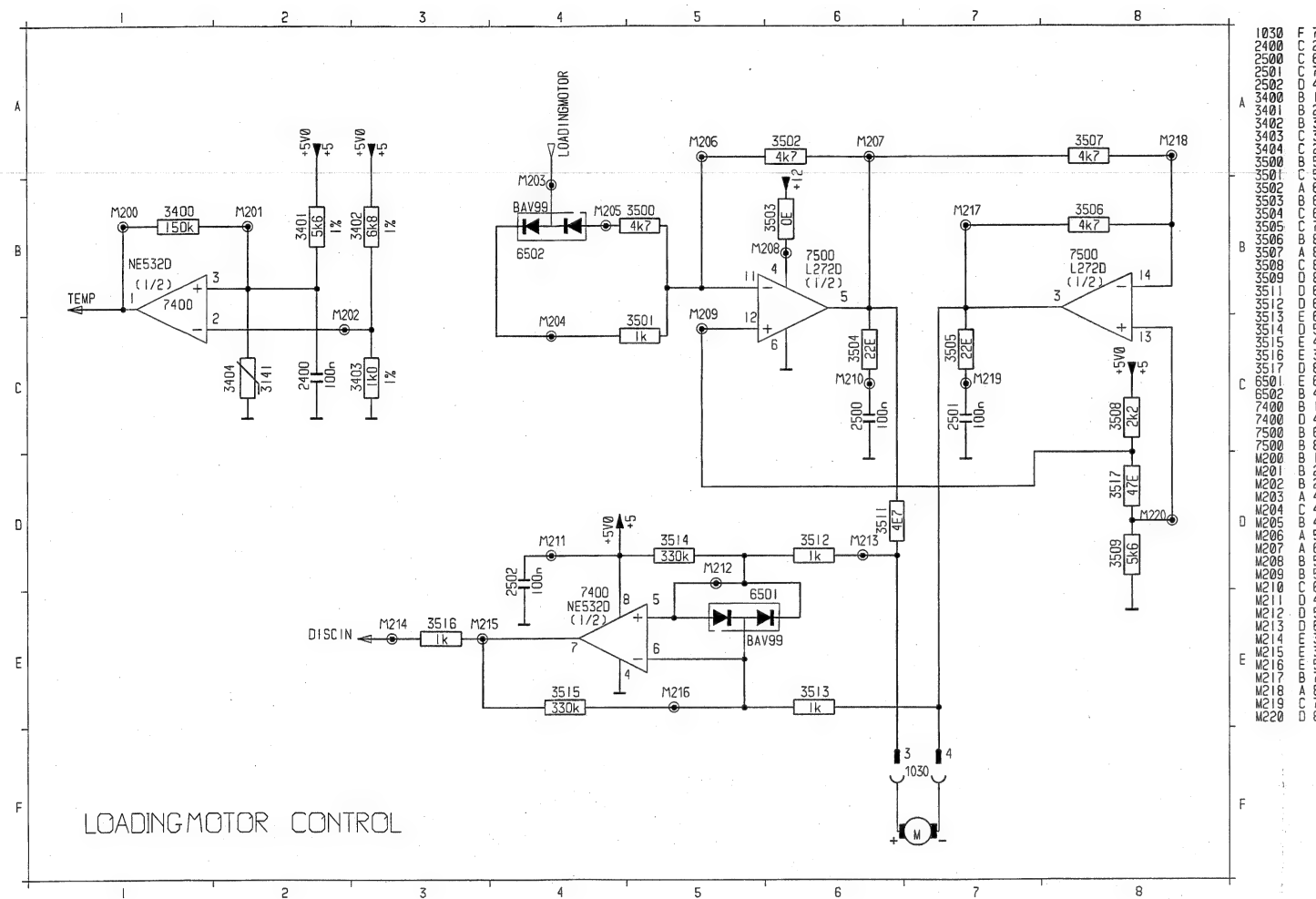


POS. 7306 LM 833

POS. 7305 BC 858

M147	B: 5,0 V (P) / 4,4 V (S,O)
M118	C: 2,2 V (P) / 5,0 V (S,O)
M113	E: 5,0 V (P,S,O)

M140	1: AF 5,0 V (P) / 5,0 V (S,O)
M140	2: AF 5,0 V (P) / 5,0 V (S,O)
M139	3: AF 5,0 V (P) / 5,0 V (S,O)
	4: GND
M145	5: AF 5,0 V (P) / 5,0 V (S,O)
M146	6: AF 5,0 V (P) / 5,0 V (S,O)
M146	7: AF 5,0 V (P) / 5,0 V (S,O)
	8: 12,0 V



POS. 6501 BAV 99

- M212 1: 3,6 V (P,S,O)
- M212 2: 3,6 V (P,S,O)
- M216 3: 3,5 V (P,S,O)

POS. 6502 BAV 99

- M204 1: 3,6 V (P,S,O) / 4,2 V (LOAD)
- M205 2: 3,6 V (P,S,O) / 1,0 V (EJECT)
- M203 3: 3,4 V (P,S,O) / 5,0 V (LOAD) / 0,0 V (EJECT)

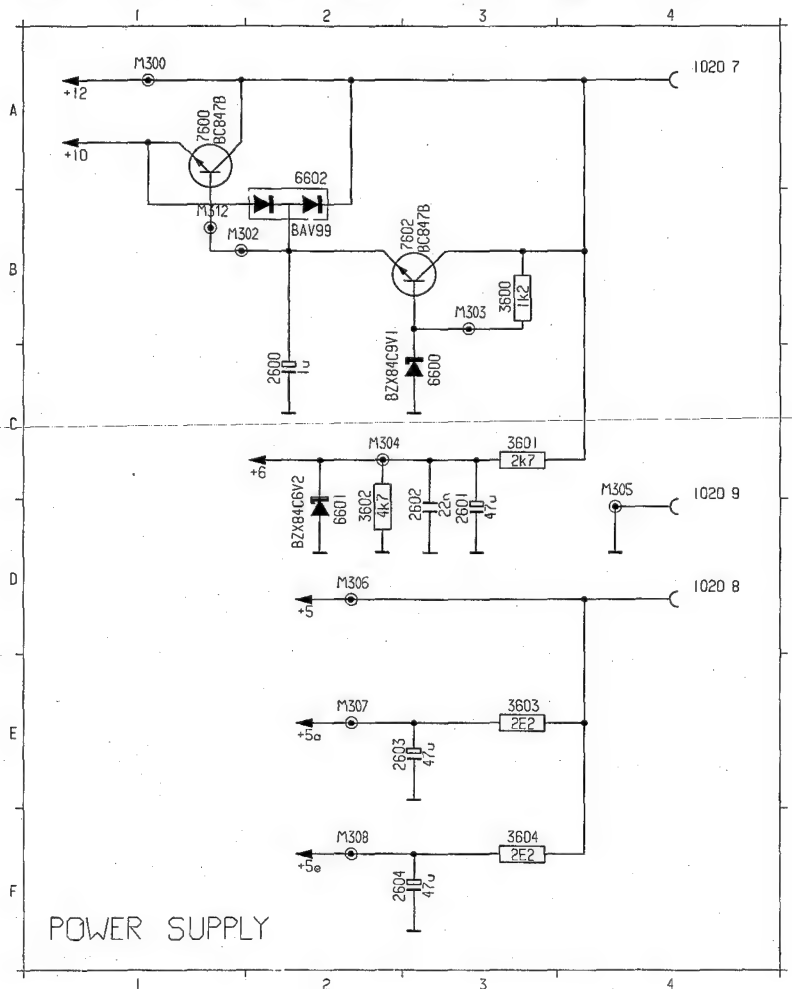
POS. 7400 NE 532D

- M200 1: 3,9 V (P,S,O) / 0,0 V (T 70\$C)
- M202 2: 0,6 V (P,S,O)
- M201 3: 2,3 V (P,S,O)
- M200 4: GND
- M212 5: 3,6 V (P,S,O)
- M216 6: 3,5 V (P,S,O)
- M215 7: 3,8 V (P,S,O) / 0,0 V (LOAD)
- M211 8: 5,0 V (P,S,O)

POS. 7500 L 272D

- M217 1: nc
- M208 2: nc
- M207 3: 3,5 V (P,S,O) / 6,5 V (LOAD) / 0,5 V (EJECT)
- M208 4: 12,0 V (P,S,O)
- M207 5: 3,5 V (P,S,O) / 0,5 V (LOAD) / 6,5 V (EJECT)
- M207 6: GND
- M207 7: nc
- M208 8: nc
- M207 9: nc
- M207 10: nc
- M206 11: 3,6 V (P,S,O)
- M209 12: 3,6 V (P,S,O)
- M220 13: 3,6 V (P,S,O)
- M218 14: 3,6 V (P,S,O)
- M207 15: nc
- M207 16: nc

1020	A 4	2601	D D 3	3600	B B 4	3604	F F 3	7600	A 1	M303	B 3	M307	F 3
1020	D 4	2602	F F 3	3601	C C 4	6600	F F 3	7602	B 3	M304	C 4	M308	B 3
1020	C 4	2603	F F 3	3602	F F 3	6601	A 1	M300	A 1	M305	D 2	M312	B 3
2600	C 2	2604	F F 3	3603	F F 3	6602	A 1	M302	B 1	M306	D 2		



POS. 6602 BAV 99

M300 1: 12,0 V (P,S,O)
2: 8,4 V (P,S,O)
M302 3: 9,0 V (P,S,O)

POS. 7600 BC 847B

M302 B: 9,0 V (P,S,O)
M300 C: 12,0 V (P,S,O)
E: 8,4 V (P,S,O)

POS. 7602 BC 847B

M303 B: 9,5 V (P,S,O)
M300 C: 12,0 V (P,S,O)
M302 E: 9,0 V (P,S,O)

POS. 7000 L 272D

	1: nc
	2: nc
M434	3: 2,6 V (P) / 2,4 V (S,O)
M437	4: 12,0 V (P,S,O)
M441	5: 2,4 V (P) / 2,6 V (S,O)
	6: GND
	7: nc
	8: nc
	9: nc
	10: nc
M438	11: 2,5 V (P,S,O)
M439	12: 2,5 V (P,S,O)
M435	13: 2,5 V (P,S,O)
M432	14: 2,5 V (P,S,O)
	15: nc
	16: nc

POS. 7001 TDA 8808T/C3

M426	1: 2,5 V (P) / 0,4 V (S,O)
	2: 4,7 V (P) / 5,0 V (S,O)
M427	3: 2,0 V (P) / 2,5 V (S,O)
M423	4: 2,2 V (P,S,O)
	5: not const. (P) / 0 V (S,O)
M417	6: 2,8 V (P) / 0,0 V (S,O)
M428	7: 0,6 V (P,S,O)
M424	8: 1,3 V (P,S,O)
M418	9: 0,0 V (P,S,O)
M422	10: 4,6 V (P) / 70 mV (S,O)
M413	11: 4,7 V (P) / 5,0 V (S,O)
M421	12: 5,0 V (P) / 0,0 V (S,O)
	13: GND
M429	14: 2,8 V (P) / 3,8 V (S,O)
M420	15: 2,5 V (P,S,O)
M419	16: 2,5 V (P,S,O)
M416	17: 3,4 V (P) / 0 V (S,O)
M415	18: 0,2 V (P) / 0,0 V (S,O)
M414	19: 1,7 V (P) / 4,2 V (S,O)
M409	20: 2,9 V (P) / 3,7 V (S,O)
M408	21: 2,9 V (P) / 3,7 V (S,O)
M404	22: 1,3 V (P) / 0,0 V (S,O)
M403	23: 1,3 V (P) / 0,0 V (S,O)
M405	24: 1,3 V (P) / 0,0 V (S,O)
M406	25: 1,3 V (P) / 0,0 V (S,O)
	26: 1,4 V (P,S,O)
	27: GND
M425	28: 3,2 V (P) / 3,6 V (S,O)

POS. 7003 BC 868

M412	B: 3,5 V (P) / 0 V (S,O)
	C: 3,8 V (P) / 4,7 V (S,O)
M411	E: 2,8 V (P) / 0 V (S,O)

POS. 7100 TCA 0372DP1

M478	1: 6,0 V (P,S,O)
M481	2: 12,0 V (P,S,O)
M480	3: 6,0 V (P,S,O)
	4: GND
M482	5: 6,0 V (P,S,O)
	6: 6,0 V (P,S,O)
	7: 6,0 V (P,S,O)
M464	8: 6,0 V (P,S,O)

POS. 7101 TDA 8809T/C2

	1: 4,7 V (P) / 5,0 V (S,O)
M459	2: sinus 2,5 V (P,S,O)
M460	3: sinus 2,5 V (P,S,O)
M462	4: 0,1 V (P,S,O)
M461	5: 1,3 V (P,S,O)
M444	6: 4,5 V (P,S,O)
M443	7: 2,3 V (P) / 5,0 V (S,O)
M448	8: 0,0 V (P,S,O)
M449	9: 5,0 V (P) / 0,0 V (S,O)
M450	10: 5,0 V (P,S,O)
M451	11: 5,0 V (P,S,O)
	12: 8,4 V (P,S,O)
	13: GND
	14: GND
M453	15: 6,0 V (P,S,O)
M454	16: 2,5 V (P,S,O)
M456	17: 2,5 V (P,S,O)

M455	18: 2,5 V (P,S,O)
M457	19: 2,5 V (P,S,O)
M458	20: 2,5 V (P,S,O)
M442	21: not const. 1,8...2,1 V (P) / 3,7 V (S,O)
M452	22: 1,2 V (P,S,O)
M445	23: not const. (P) / 0,6 V (S,O)
M445	24: not const. (P) / 0,6 V (S,O)
M446	25: 2,6 V (P) / 5,0 V (S,O)
M447	26: 2,0 V (P) / 4,3 V (S,O)
M409	27: 2,9 V (P) / 3,7 V (S,O)
M408	28: 2,9 V (P) / 3,7 V (S,O)

POS. 7102 BC 847B

M487	B: 1,8 V (P) / 3,5 V (S,O)
M488	C: 4,3 V (P) / 3,0 V (S,O)
M490	E: 3,0 V (P,S,O)

POS. 7103 BC 858B

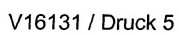
M489	B: 4,3 V (P,S,O)
M486	C: 0,0 V (P) / 5,0 V (S,O)
	E: 5,0 V (P,S,O)

POS. 7200 BC 847B

M472	B: 20 mV (P,S,O)
M473	C: 5,0 V (P,S,O)
	E: GND

POS. 7201 MC 68HC05C8

M473	1: 5,0 V (P,S,O)
M465	2: see MRQ (P) / 5,0 V (S,O)
	3: nc
	4: 5,0 V (P,S,O)
M465	5: see MRQ (P) / 5,0 V (S,O)
M417	6: 2,8 V (P) / 0,0 V (S,O)
M110	7: 5,0 V (P,S,O)
M448	8: 0,0 V (P,S,O)
M449	9: 5,0 V (P) / 0,0 V (S,O)
M450	10: 5,0 V (P,S,O)
M451	11: 5,0 V (P,S,O)
M463	12: 2,3 V (P,S,O)
M128	13: see QRA (P) / 40 mV (S,O)
M130	14: see QCL (P) / 5,0 V (S,O)
M129	15: see QDA (P) / 0,0 V (S,O)
M422	16: 3,9 V (P) / 70 mV (S,O)
M117	17: 5,0 V (P,S,O)
	18: nc
	19: nc
	20: nc
M486	21: 0,0 V (P) / 5,0 V (S,O)
	22: GND
	23: nc
M203	24: 3,4 V (P,S,O)
M444	25: 4,5 V (P,S,O)
M421	26: 5,0 V (P) / 0,0 V (S,O)
	27: nc
M532	28: 5,0 V (COMPRESS OFF) / 0,0 V (COMPRESS ON)
M120	29: 0,0 V (P) / 5,0 V (S,O)
M467	30: see SDA (P) / 5,0 V (S,O)
M466	31: see SCL (P) / 5,0 V (S,O)
M200	32: 3,9 V (P,S,O)
M214	33: 3,8 V (P,S,O) / 0,0 V (LOAD)
M109	34: see MC (P) / 70 mV (S,O)
M469	35: 0,0 V (P,S) / 5,0 V (O)
M468	36: 5,0 V (P,S,O)
M443	37: 2,3 V (P) / 5,0 V (S,O)
	38: nc
M477	39: 4,7 V (P) / 5,0 V (S,O)
	40: nc
M477	41: 4,7 V (P) / 5,0 V (S,O)
M474	42: 2,7 V (P,S,O)
M475	43: 2,4 V (P,S,O)
	44: 5,0 V (P,S,O)



POS. 7781 LM 833

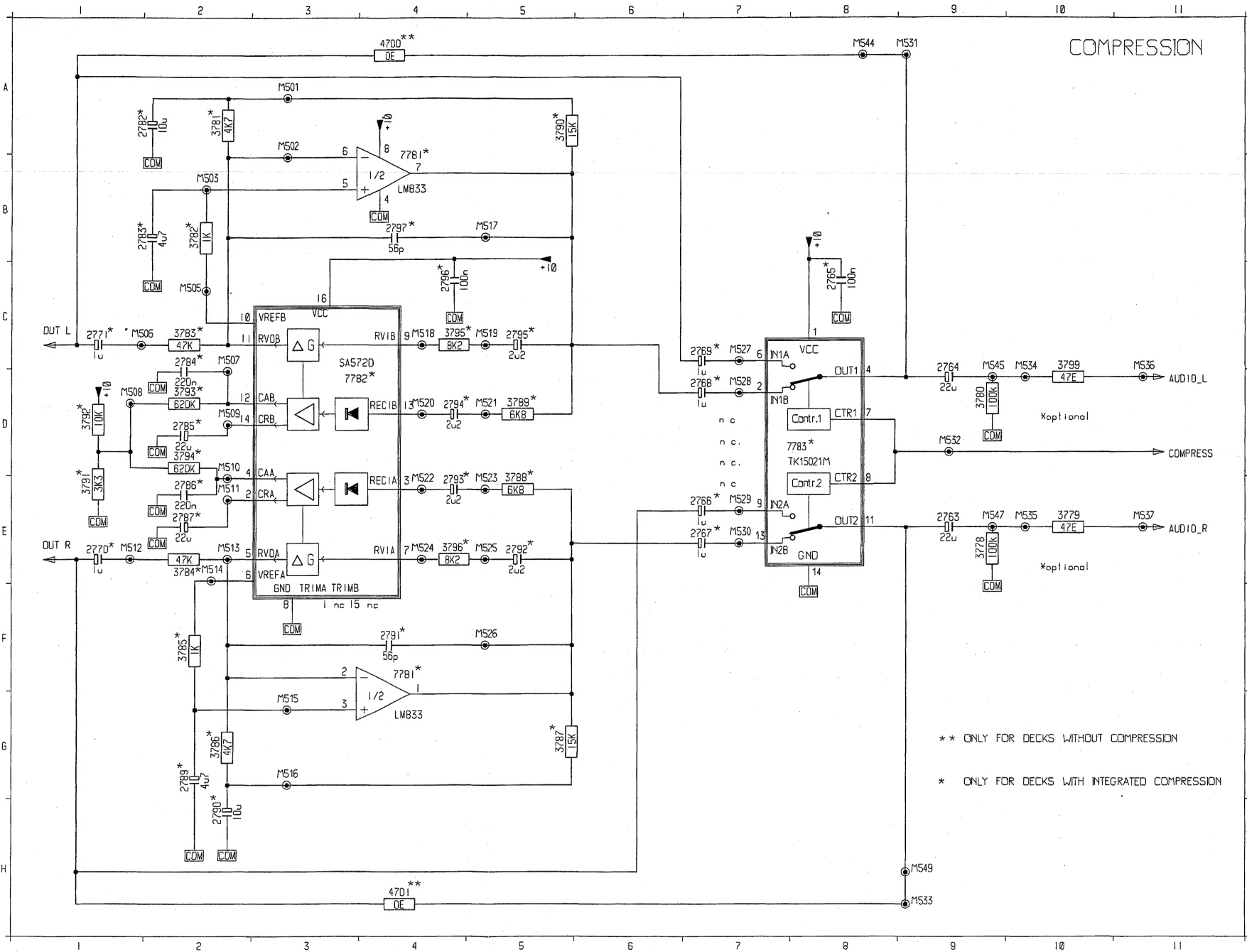
M526	1: 2,5 V (P,S,O)
M513	2: 2,5 V (P,S,O)
M515	3: 2,5 V (P,S,O)
	4: GND
M503	5: 2,5 V (P,S,O)
M502	6: 2,5 V (P,S,O)
M517	7: 2,5 V (P,S,O)
	8: 8,0 V (P,S,O)

POS. 7782 SA 572D

	1: nc
M511	2: AF 1,5 V (P) / 1,1 V (S,O)
M522	3: 2,5 V (P,S,O)
M510	4: AF 1,5 V (P) / 1,1 V (S,O)
M513	5: 2,5 V (P,S,O)
M514	6: 2,5 V (P,S,O)
M524	7: 2,5 V (P,S,O)
	8: GND
M518	9: 2,5 V (P,S,O)
M505	10: 2,5 V (P,S,O)
M502	11: 2,5 V (P,S,O)
M507	12: AF 1,5 V (P) / 1,1 V (S,O)
M520	13: 2,5 V
M509	14: AF 1,5 V (P) / 1,1 V (S,O)
	15: nc
	16: 8,0 V (P,S,O)

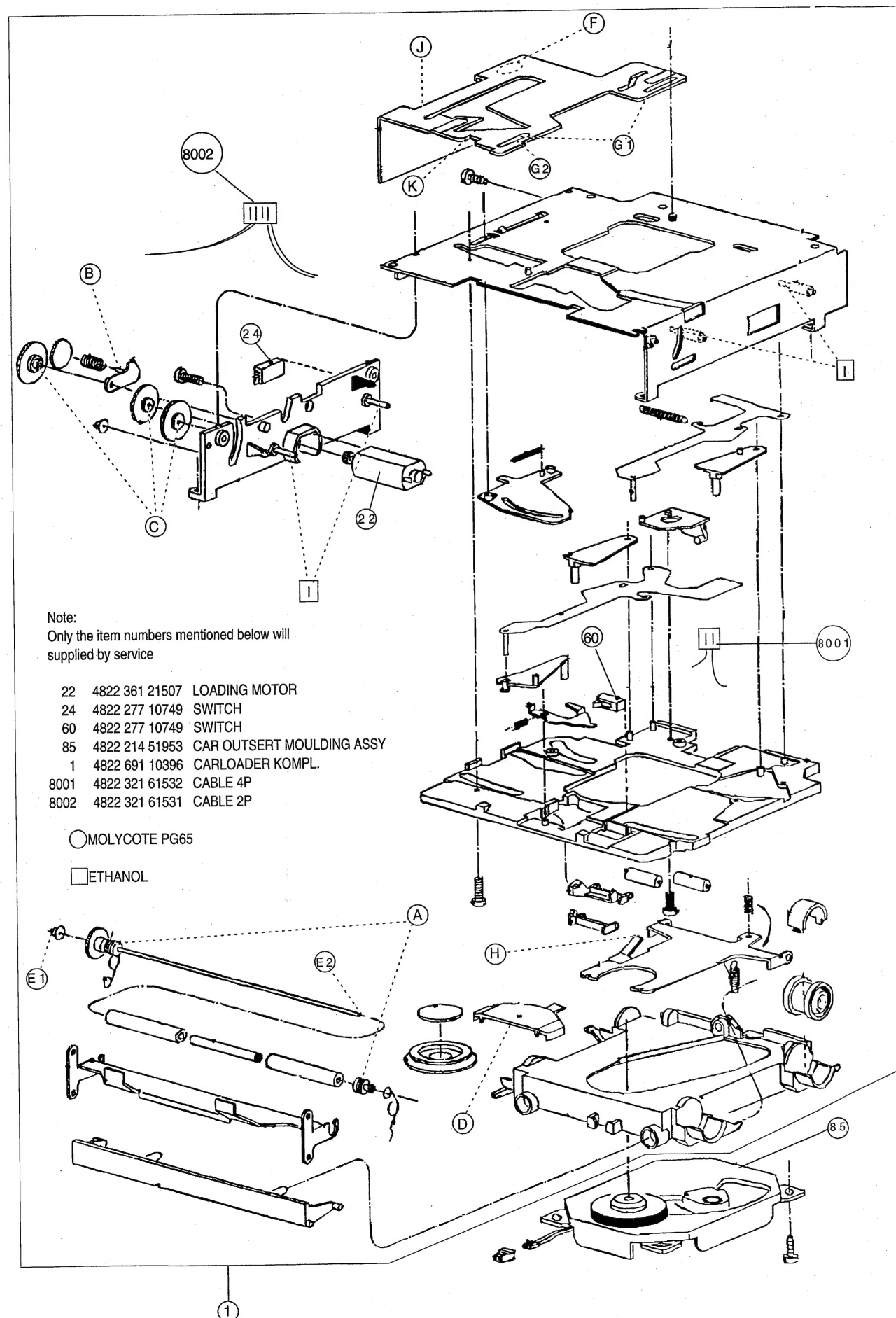
POS. 7783 TK 15021M

	1: 8,0 V (P,S,O)
M528	2: 4,0 V (P,S,O)
	3: nc
M531	4: 4,0 V (P,S,O)
	5: nc
M527	6: 4,0 V (P,S,O)
M532	7: 5,0 V (COMPRESS OFF) / 0,0 V (COMPRESS ON)
M532	8: 5,0 V (COMPRESS OFF) / 0,0 V (COMPRESS ON)
M529	9: 4,0 V (P,S,O)
	10: nc
M549	11: 4,0 V (P,S,O)
	12: nc
M530	13: 4,0 V (P,S,O)
	14: GND



** ONLY FOR DECKS WITHOUT COMPRESSION

* ONLY FOR DECKS WITH INTEGRATED COMPRESSION



Mechanical partslist

1	4822 502 11715	M 2,5X5 PAN>STZNBK
2	4822 502 30541	2,2X(PT/PAN+STZN
8 1 1	4822 529 10277	SHOCK ABSORBER
9 1 1	4822 529 10277	SHOCK ABSORBER
10 1 1	4822 529 10277	SHOCK ABSORBER
11 1 1	4822 529 10277	SHOCK ABSORBER
22 1 1	4822 361 21507	MOTOR ASSY
24 1 1	4822 277 10749	SWITCH MUTE
34 1 1	4822 502 12001	M 2 X 4PANZNBK
35 1 1	4822 502 12001	M 2 X 4PANZNBK
36 1 1	4822 502 12001	M 2 X 4PANZNBK
37 1 1	4822 502 12001	M 2 X 4PANZNBK
38 1 1	4822 502 12001	M 2 X 4PANZNBK
39 1 1	4822 502 12001	M 2 X 4PANZNBK
60 1 1	4822 277 10749	SWITCH MUTE
77 1 1	4822 502 12001	M 2 X 4PANZNBK
8001	4822 321 61531	CABLE, 2P
3 8001	4822 267 30871	CONNECTOR 2P.
8002	4822 321 61532	CABLE, 4P
5 8002	4822 267 40672	DISC 4POL.
81 1	4822 691 30275	MECH UNITCDM-9
8 81 1	4822 701 10425	M 2 X10T/PANZNBK
9 81 1	4822 701 10425	M 2 X10T/PANZNBK

LUBRICATING INSTRUCTIONS

Car loader

- * A) The roller spindle (pos 28) : 2 x on diameter 2,5 mm.
(On the bearing points)
- * B) The spindle of the swing bracke (all lenght).
- * C) The spindles of the gearwheels (3 x all lenght).
- * D) The pivot bearing of the pivot cover (pos 69)
(in the middle of the closing plate)
- * E) E1The roller spindle on the top on diameter 1,2 mm
E2The metal pin on the motorplate assy (pos 15)
(Diameter 1,2 mm).
- * F) The sliding surface on the top control bracket (pos 73)
in which the plastic pen of the motorplate assy is guiding.
- * G) G1The guiding grooves (2 x) on the control bracket in
which the guide pins of the chassis are guiding.
G2The tag on the control bracket which actuate the switch brackets.
- * H) The tag on the pressure plate (pos 66).
- # I) The suspension pins (2 x) of the chassis.
The suspension pins (2 x) of the motorplate assy.
- * J) The teeth of the control bracket.
- * K) On the control bracket the sliding surface of the detection bracket.
- * MOLYCOTE PG 65/Q5-7565 code nr. 1304 501 0841
- # ETHANOL code nr. 1322 506 35201

Capacitors		
2000	5322 122 32654	22NF10%X7R 63V
2001	5322 122 32654	22NF10%X7R 63V
2002	5322 122 32268	470PF 10% 50V
2003	4822 122 31746	1000PF 2%NP0 63V
2004	4822 122 32916	220NF10%X7R 63V
2005	4822 124 22646	47UF20% 16V
2006	4822 122 33584	220PF 5%
2007	4822 122 32916	220NF10%X7R 63V
2008	4822 122 33584	220PF 5%
2009	4822 121 51436	820NF10% 63V
2010	5322 122 33816	2200PF 2%NP0 63V
2011	4822 122 32542	47NF10%X7R 63V
2012	5322 122 32531	100PF 5%NP0 50V
2013	4822 122 33177	10NF 20% X7R 50V
2014	4822 122 31746	1000PF 2%NP0 63V
2015	4822 126 12104	12NF 5%
2016	5322 122 32654	22NF10%X7R 63V
2017	4822 126 12106	220NF 5%
2018	5322 122 32654	22NF10%X7R 63V
2019	4822 122 33177	10NF 20% X7R 50V
2020	4822 122 32916	220NF10%X7R 63V
2100	4822 122 32916	220NF10%X7R 63V
2101	4822 121 51361	5,6NF 2% 160V
2102	4822 121 51051	4,7NF 1% 160V
2103	4822 121 51262	910PF 1% 400V
2104	4822 124 22646	47UF20% 16V
2105	4822 126 12105	33NF 5%
2106	4822 122 32916	220NF10%X7R 63V
2107	4822 122 32916	220NF10%X7R 63V
2108	5322 122 32654	22NF10%X7R 63V
2109	5322 122 32654	22NF10%X7R 63V
2110	4822 122 32916	220NF10%X7R 63V
2111	4822 122 32916	220NF10%X7R 63V
2112	4822 122 33177	10NF 20% X7R 50V
2113	4822 122 32916	220NF10%X7R 63V
2114	4822 122 32916	220NF10%X7R 63V
2200	5322 122 32654	22NF10%X7R 63V
2201	4822 122 32916	220NF10%X7R 63V
2202	5322 122 32452	47PF 5%NP0 63V
2203	5322 122 32452	47PF 5%NP0 63V
2300	5322 122 33816	2200PF 2%NP0 63V
2301	5322 122 32452	47PF 5%NP0 63V
2302	4822 122 32916	220NF10%X7R 63V
2304	4822 122 33496	100NF10%X7R 63V
2305	4822 124 80453	100UF 20% 10V
2306	5322 122 32654	22NF10%X7R 63V
2307	4822 122 33584	220PF 5%
2308	4822 122 33496	100NF10%X7R 63V
2309	4822 124 23582	220UF 20% 10V
2311	4822 122 32916	220NF10%X7R 63V
2312	5322 122 32658	22PF 5% 50V
2313	5322 122 32658	22PF 5% 50V
2314	5322 122 32658	22PF 5% 50V
2315	4822 124 80109	0,22UF20% 50V
2316	5322 126 10223	4,7NF 5% XR7
2317	2222 580 16523	4,7NF 5% XR7
2320	4822 124 23582	220UF 20% 10V
2321	4822 122 33496	100NF10%X7R 63V
2322	4822 122 33496	100NF10%X7R 63V
2323	4822 122 33496	100NF10%X7R 63V
2324	4822 124 80453	100UF 20% 10V
2325	4822 124 22646	47UF20% 16V
2326	4822 122 32916	220NF10%X7R 63V
2327	4822 124 23279	22UF20% 16V
2328	5322 122 32654	22NF10%X7R 63V
2329	5322 122 32654	22NF10%X7R 63V
2331	4822 122 32916	220NF10%X7R 63V
2332	4822 124 11353	1UF 20% 16V

2333	5322 122 32268	470PF 10% 50V
2334	5322 122 32531	100PF 5%NP0 50V
2335	5322 122 32268	470PF 10% 50V
2336	5322 122 32531	100PF 5%NP0 50V
2337	4822 124 11353	1UF 20% 16V
2338	4822 122 33175	2,2NF 20% X7R 50V
2339	4822 122 33175	2,2NF 20% X7R 50V
2340	4822 122 33496	100NF10%X7R 63V
2341	4822 122 33496	100NF10%X7R 63V
2342	4822 122 33496	100NF10%X7R 63V
2400	4822 122 33496	100NF10%X7R 63V
2500	4822 122 33496	100NF10%X7R 63V
2501	4822 122 33496	100NF10%X7R 63V
2502	4822 122 33496	100NF10%X7R 63V
2600	4822 124 23282	1UF20% 50V
2601	4822 124 22646	47UF20% 16V
2602	5322 122 32654	22NF10%X7R 63V
2603	4822 124 22646	47UF20% 16V
2604	4822 124 22646	47UF20% 16V
2763	4822 124 23279	22UF20% 16V
2764	4822 124 23279	22UF20% 16V
Resistors		
3000	4822 051 20472	4K70 5% 0,1W
3001	4822 051 20104	100K00 5% 0,1W
3002	4822 051 20229	22R00 5% 0,1W
3003	4822 051 20229	22R00 5% 0,1W
3004	4822 051 20101	100R00 5% 0,1W
3005	4822 051 51203	12K00 1% 0,125W
3006	4822 051 20101	100R00 5% 0,1W
3007	4822 051 20102	1K00 5% 0,1W
3008	4822 051 52403	24K00 1% 0,125W
3009	4822 051 53003	30K00 1% 0,125W
3010	4822 051 10222	2K20 2% 0,25W
3011	4822 051 20243	24K00 5% 0,1W
3012	4822 051 20224	220K00 5% 0,1W
3013	4822 051 20823	82K00 5% 0,1W
3014	4822 051 20478	4R70 5% 0,1W
3015	4822 051 20912	9K10 5% 0,1W
3016	4822 051 20229	22R00 5% 0,1W
3017	4822 051 51803	18K00 1% 0,125W
3018	4822 051 51203	12K00 1% 0,125W
3019	4822 051 20229	22R00 5% 0,1W
3020	4822 051 20243	24K00 5% 0,1W
3021	4822 051 20562	5K60 5% 0,1W
3022	4822 051 20223	22K00 5% 0,1W
3100	4822 051 10228	2R20 5% 0,25W
3101	4822 116 83634	5K6 0,25% 0,25W
3102	4822 050 22208	2R20 1% 0,6W
3103	4822 116 83634	5K6 0,25% 0,25W
3104	4822 051 10829	82R00 2% 0,25W
3105	4822 116 83634	5K6 0,25% 0,25W
3106	4822 051 20229	22R00 5% 0,1W
3107	4822 116 83634	5K6 0,25% 0,25W
3108	4822 051 20154	150K00 5% 0,1W
3109	4822 051 51803	18K00 1% 0,125W
3110	4822 051 51302	1K30 1% 0,125W
3111	4822 051 20512	5K10 5% 0,1W
3112	4822 051 20224	220K00 5% 0,1W
3113	4822 051 20223	22K00 5% 0,1W
3114	4822 051 54703	47K00 1% 0,125W
3115	4822 051 51803	18K00 1% 0,125W
3116	4822 051 20223	22K00 5% 0,1W
3117	4822 051 20473	47K00 5% 0,1W
3118	4822 051 20222	2K20 5% 0,1W
3119	4822 051 20332	3K30 5% 0,1W
3120	4822 051 20103	10K00 5% 0,1W
3200	4822 051 20223	22K00 5% 0,1W
3201	4822 051 20223	22K00 5% 0,1W

3202	4822 051 20223	22K00 5% 0,1W
3203	4822 051 20101	100R00 5% 0,1W
3204	4822 051 20224	220K00 5% 0,1W
3205	4822 051 20334	330K00 5% 0,1W
3206	4822 051 20104	100K00 5% 0,1W
3300	4822 051 20222	2K20 5% 0,1W
3301	4822 051 20223	22K00 5% 0,1W
3302	4822 051 20223	22K00 5% 0,1W
3303	4822 051 20478	4R70 5% 0,1W
3304	4822 051 20222	2K20 5% 0,1W
3305	4822 051 20008	0R00 5% 0,1W
3307	4822 051 10228	2R20 5% 0,25W
3311	4822 051 20224	220K00 5% 0,1W
3312	4822 051 20473	47K00 5% 0,1W
3313	4822 051 20182	1K80 5% 0,1W
3314	4822 051 20182	1K80 5% 0,1W
3319	4822 051 20229	22R00 5% 0,1W
3320	4822 051 20473	47K00 5% 0,1W
3321	4822 051 20104	100K00 5% 0,1W
3323	4822 051 53003	30K00 1% 0,125W
3324	4822 051 53003	30K00 1% 0,125W
3325	4822 051 20103	10K00 5% 0,1W
3326	4822 051 20104	100K00 5% 0,1W
3327	4822 051 20104	100K00 5% 0,1W
3328	4822 051 53003	30K00 1% 0,125W
3329	4822 051 53003	30K00 1% 0,125W
3330	4822 051 20102	1K00 5% 0,1W
3331	4822 051 20102	1K00 5% 0,1W
3332	4822 051 20229	22R00 5% 0,1W
3333	4822 051 20229	22R00 5% 0,1W
3400	4822 051 20154	150K00 5% 0,1W
3401	4822 051 10562	5K60 2% 0,25W
3402	4822 051 10682	6K80 2% 0,25W
3403	4822 051 10102	1K00 2% 0,25W
3404	4822 116 30426	4K7 3% 0,1W
3500	4822 051 20472	4K70 5% 0,1W
3501	4822 051 20102	1K00 5% 0,1W
3502	4822 051 20472	4K70 5% 0,1W
3503	4822 051 10008	0R00 5% 0,25W
3504	4822 051 20229	22R00 5% 0,1W
3505	4822 051 20229	22R00 5% 0,1W
3506	4822 051 20472	4K70 5% 0,1W
3507	4822 051 20472	4K70 5% 0,1W
3508	4822 051 20222	2K20 5% 0,1W
3509	4822 051 20562	5K60 5% 0,1W
3511	4822 051 20478	4R70 5% 0,1W
3512	4822 051 20102	1K00 5% 0,1W
3513	4822 051 20102	1K00 5% 0,1W
3514	4822 051 20334	330K00 5% 0,1W
3515	4822 051 20334	330K00 5% 0,1W
3516	4822 051 20102	1K00 5% 0,1W
3517	4822 051 20479	47R00 5% 0,1W
3600	4822 051 20122	1K20 5% 0,1W
3601	4822 051 20272	2K70 5% 0,1W
3602	4822 051 20472	4K70 5% 0,1W
3603	4822 051 10228	2R20 5% 0,25W
3604	4822 051 10228	2R20 5% 0,25W
3778	4822 051 20104	100K00 5% 0,1W
3779	4822 051 20479	47R00 5% 0,1W
3780	4822 051 20104	100K00 5% 0,1W
3799	4822 051 20479	47R00 5% 0,1W
4100	4822 051 20008	0R00 5% 0,1W
4200	4822 051 20008	0R00 5% 0,1W
4700	4822 051 20008	0R00 5% 0,1W
4701	4822 051 20008	0R00 5% 0,1W
Diodes		
6100	5322 130 31928	BAS16
6200	5322 130 31928	BAS16
6501	5322 130 34337	BAV99

6502	5322 130 34337	BAV99
6600	4822 130 33996	BZX84-C9V1
6601	5322 130 33671	BZX84-C6V2
6602	5322 130 34337	BAV99
IC's		
7000	4822 209 31131	L272D
7001	4822 209 73234	TDA8808T/C3
7003	5322 130 61569	BC868
7100	4822 209 62059	TCA0372DP1